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② Draft Development Concept Plan
Environmental Assessment

⑤ U.S. Dept. of Interior
⑥ 1994

0651-B-05



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③ **NEW RIVER GORGE**

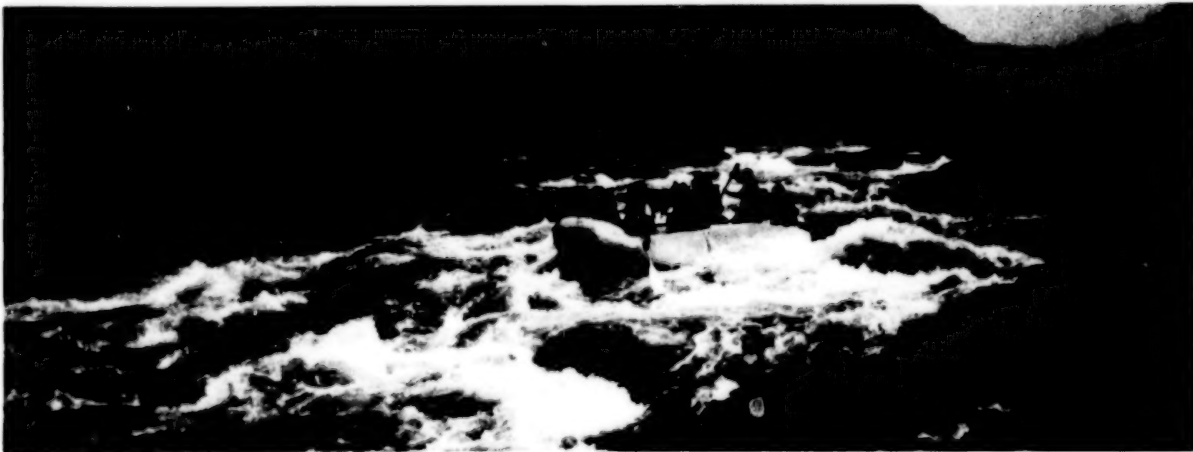
Teays

National River • West Virginia

Pub. 94-021631
REQ. 94-015435

Draft
Development Concept Plan
Environmental Assessment

September 1993



Teays
NEW RIVER GORGE

National River • West Virginia

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SUMMARY

This *Development Concept Plan/ Environmental Assessment* addresses the issues surrounding visitor use, resource protection, and development in the Teays area of New River Gorge National River. This document serves as a continuation of the process begun in the national river's 1982 *General Management Plan*.

Since completion of the 1982 management plan, however, visitation and use of the area has increased substantially, the publicly owned land base has increased, and permanent visitor facilities have been constructed. These substantive changes require the National Park Service to reevaluate some of the recommendations proposed in the 1982 management plan and subsequent planning documents and to review current management objectives and pertinent public input about the Teays area.

The challenge for the Teays plan is to decide if and how to accommodate increased visitation within the context of the legislation that established the national river.

Of the original four alternatives considered, two were rejected (see "Alternatives Considered But Rejected" section) and the other two are presented in this plan. Because of its brevity, the interpretive prospectus has been incorporated into the discussion of the alternatives. Alternative A, no action, describes a continuation of current management of the study area. No activities are proposed that would affect state management of State Route 82 (Route 82) or the Fayette Station bridge.

Alternative B, the preferred alternative, is based on (1) current NPS planning and management objectives, (2) public

comments, and (3) a recent congressional appropriation for Fayette Station bridge. Because Route 82 and Fayette Station bridge are owned by the state and are also within the legislated boundary for the national river, the National Park Service would work with the state regarding resolution of the issues surrounding

the repair, if feasible, of the Fayette Station bridge for vehicular and pedestrian traffic — or if repair is not possible, replacing the bridge with a structure that reflects the area's historic context,

the subsequent designation by the state of Route 82 as a one-way, eastbound road from the mine entry road on the west side of the gorge to Route 85/3 on the east side (other traffic would remain two way),

the determination of the state right-of-way boundary along Route 82, and

addressing safety problems associated with the existing road conditions along Route 82.

Any actions taken to implement a long-range solution for the bridge and Route 82 would need to be the result of actions taken by the state in cooperation with the National Park Service. The National Park Service is committed to working with the state for the preservation of the Fayette Station bridge, if feasible, for its historical, recreational, and functional values.

The most important impact on the area's cultural resources under alternative A would be the unabated disintegration of the Fayette Station bridge. Under alternative B, repair of the bridge would be a positive impact; however, removal or replacement of the bridge would be an

adverse impact. This action could also adversely affect the archeological resources at Fayette.

There would be no new disturbance to natural resources on State Route 82 under alternative A. Under alternative B, the development of a shuttle system would be a positive impact on area's traffic congestion and air quality. Estimates of new disturbances along Route 82 under alternative B are not possible until the state Department of Highways develops preliminary designs. Other impacts on natural resources from NPS actions would be minor under either alternative.

Traffic congestion and safety problems on Route 82 — such as narrow roadway widths, hairpin turns, cars parking in undesignated areas along the road, and the disintegration of the Fayette Station bridge — would continue under alternative A. However, under alternative B, with the shuttle system, one-way traffic, improved roadway conditions, designated parking areas, and repair of the Fayette Station bridge, many of these problems would be alleviated. New informational and interpretive signs about the area and

improved sanitation facilities would also improve visitors' experiences.

Construction activities under alternative A would not bring any significant socio-economic benefits to the area. Construction activities under alternative B, which would lead to increased use of the area, would provide regional/local economic benefits. Bridge repair/replacement would provide state/regional/local economic benefits and accommodate increased use of the area.

The Draft Development Concept Plan/Environmental Assessment will be distributed for a 30-day public review and comment period. If appropriate, based on public comments, changes will be reflected in the final plan. If the NPS regional director (Mid-Atlantic Region) concludes that this plan will result in significant impacts on the human environment, an environmental impact statement will then be prepared; if the conclusion is that this plan will not result in significant impacts, a finding of no significant impacts will be prepared. Upon approval of the final environmental impact statement or finding of no significant impacts, the National Park Service may print a final plan, depending on whether the comments are substantive.

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PURPOSE AND NEED FOR THE PLAN

PURPOSE

This *Development Concept Plan/ Environmental Assessment* addresses the issues surrounding visitor use, resource protection, and development in the Teays area of the Lower Gorge unit of New River Gorge National River (see Vicinity map). The document is a continuation of the planning process begun in the *Statement for Management* (NPS 1981) and refined in the *General Management Plan* (NPS 1982) for New River Gorge National River. The 1982 management plan provides conceptual guidance and management direction for this area of the national river. (See appendix A for details about previous planning recommendations.) Many of the recommendations made in the 1982 *General Management Plan* for this study area were based on NPS acquisition of property at Teays Landing (Ames). Teays Landing was identified for acquisition as a major public boat put-in/take-out site that would work in conjunction with take-outs at Fayette Station (see appendix A). Teays Landing has not been acquired by the National Park Service and therefore is not included as a part of this planning document.

Since completion of the 1982 management plan, visitation and use of the area has escalated substantially, the publicly owned land base has increased, and permanent visitor facilities have been constructed. These substantive changes require that the National Park Service not only reevaluate some of the recommendations proposed in the 1982 management plan and subsequent planning documents, but also review current management objectives (appendix B) and pertinent public input (from the scoping process) on the Teays area (appendix C). This *Development Concept Plan* serves as a continuation of the general management plan process.

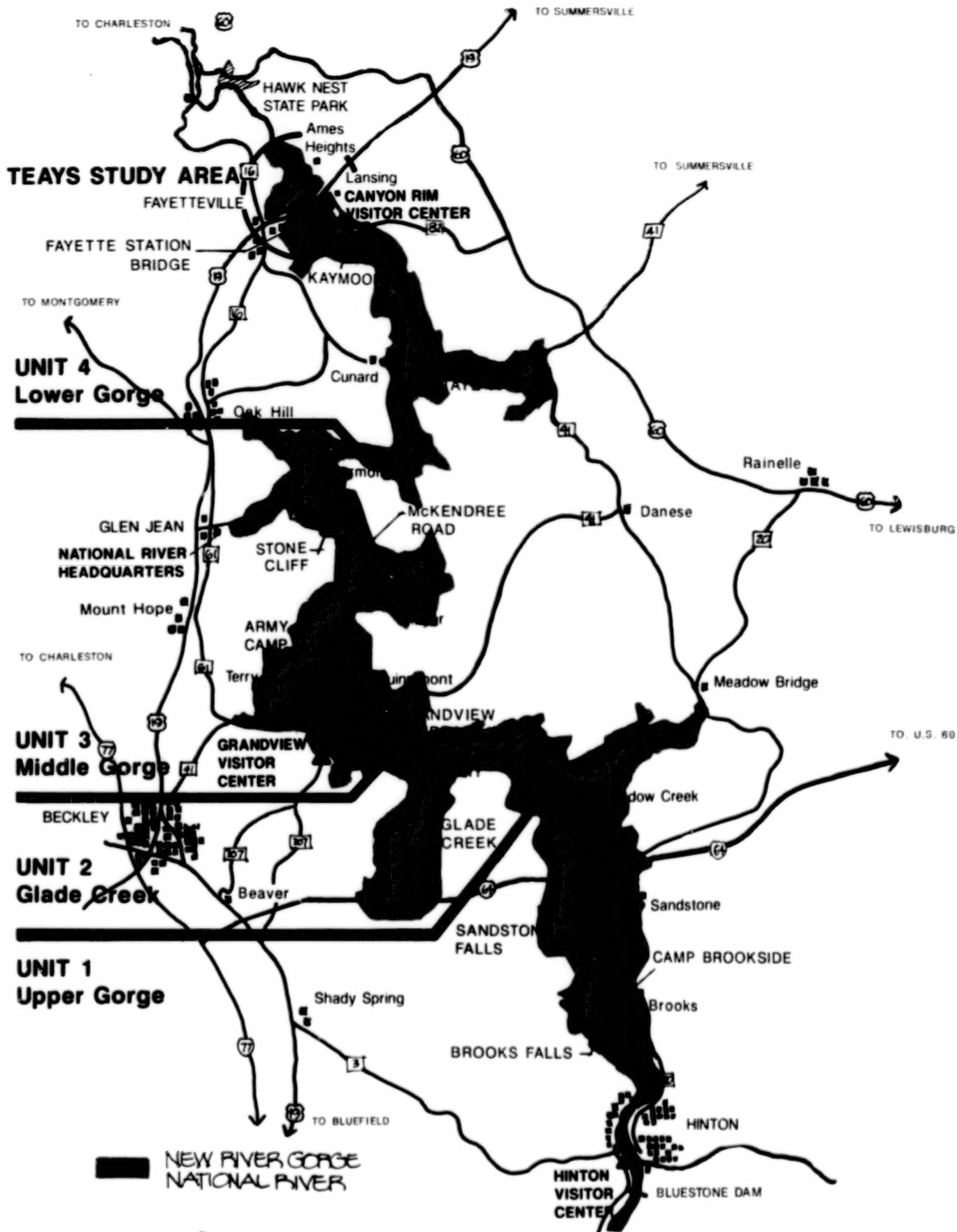
The challenge for the Teays plan is two-fold. First, the plan must decide if and how to accommodate increased visitation. Second, the plan must address these needs within the context of the purpose that was set forth in legislation that established the national river —

[C]onserving and interpreting outstanding natural, scenic, and historic values and objects in and around the New River Gorge and preserving as a free-flowing stream an important segment of the New River in West Virginia for the benefit and enjoyment of present and future generations. (Public Law 95-625, November 10, 1978)

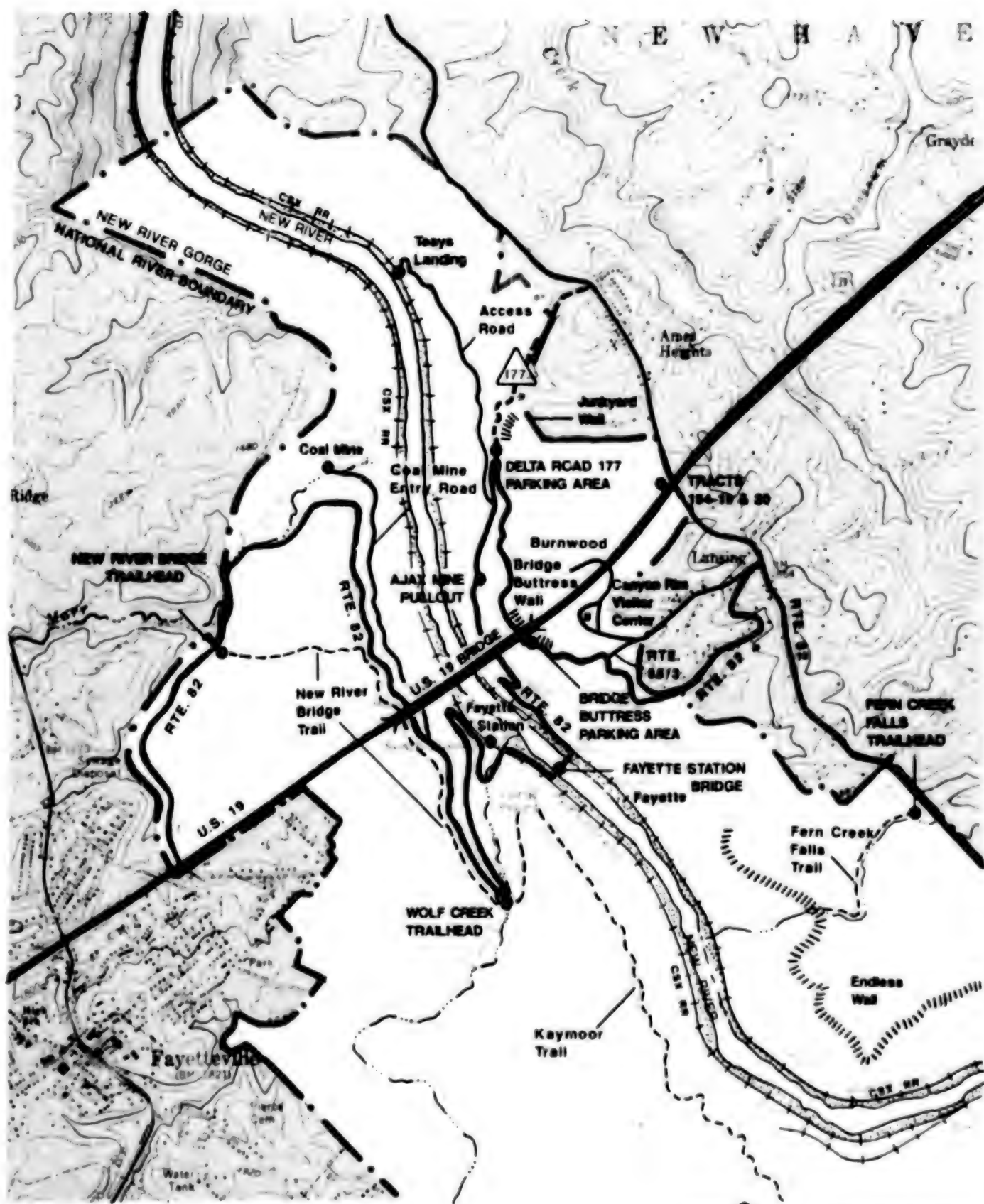
DESCRIPTION OF THE STUDY AREA

The 50-mile, 62,000-acre New River Gorge National River corridor, in the Appalachian Mountains of southern West Virginia, runs from the town of Hinton in the south to just north of the U.S. 19 bridge near Fayetteville.

The Teays study area includes areas in the Lower Gorge unit of the national river that are on or near State Route 82 (Route 82) and the U.S. 19 bridge (see Study Area map) that have not previously been examined in other NPS planning documents. Road access into the Lower Gorge unit is limited to Route 82 in the north, Route 25 in the south at Thurmond, and an unnamed route at Cunard. There are no active settlements in the unit, although important historic sites at Sewell, Kaymoor, and Nuttallburg are still there. The surrounding forest has reclaimed most of the evidence of past mining activities. Rock outcrops along the canyon rim provide dramatic scenic views and challenges



VICINITY
TEAYS STUDY AREA
NEW RIVER GORGE NATIONAL RIVER
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STUDY AREA

TEAYS STUDY AREA

NEW RIVER GORGE NATIONAL RIVER

United States Department of the Interior

National Park Service

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TEAYS STUDY AREA SITES

Route 82 is a narrow, one-lane/two-way state-owned and maintained road that winds through the study area and down the steep slopes of the gorge. The primary area of concern for the road is between the proposed New River Bridge trailhead, where the two-way road changes to one lane, and where Route 82 intersects with Route 85/3 on the north side of the gorge. Hairpin curves, narrow roadway widths, sight distances, and people parking along the roadway are some of the issues along this road.

The proposed **New River Bridge Trailhead** would be on the western rim of the gorge at an area that was disturbed for construction of the U.S. Highway 19 bridge. Rehabilitation of a trail from the Wolf Creek trailhead to this area is underway. No parking is permitted at the New River Bridge trailhead.

Wolf Creek Trailhead is one of the primary access points to the Kayinoor mine area. On a hairpin turn, parking for four vehicles is possible. Visitors park along road shoulders when these spaces are filled, restricting room for buses and rafting equipment trucks to turn and creating dangerous traffic conditions and delays.

Fayette Station Bridge is where Route 82 crosses over the New River at the bottom of the gorge at the remains of the town of Fayette. Due to structural deterioration, the state-owned bridge has been closed since completion of the U.S. 19 bridge in 1977. Visitors and local residents ignore warning signs and use the bridge to see the river, bungee jump, and watch special events.

The **Ajax Mine Pullout**, along the eastern side of the gorge, is used by area residents to access the spring water coming out of the mine. This spring is the primary source of water for many local residents. There is room for two or three vehicles to park.

When there are more than two or three cars, people park along the road shoulder and in the roadway to wait their turns, creating traffic congestion.

Delta Road 177 Parking Area (locally known as Burma Road) is an unused dirt road that extends from Ames Heights to Route 82 as it descends the eastern side of the gorge. Rock-climbers park their vehicles along the portion of the road within the NPS boundary (on a first-in/last-out basis) to access the privately owned wall known as "junkyard wall." When they can no longer park on the road, visitors park along the hairpin curve on Route 82, restricting room for buses and rafting equipment trucks to turn and creating dangerous traffic conditions and delays.

Bridge Buttress Parking Area is a series of five pullouts of various sizes along Route 82 under the U.S. 19 bridge on the eastern side of the gorge. Rock-climbers park their vehicles along the fill shoulder of the road to access the climbing area locally known as the bridge buttress wall; many use the pullouts for unauthorized overnight camping. Currently, parking is random, with a maximum capacity of 31 vehicles.

Fern Creek Falls Trailhead has a parking area that holds about 14 vehicles. Overflow parking extends out onto Route 82, causing congestion and passing problems. The area is used mostly by rock-climbers. Unauthorized use of the area as an overnight campground is creating sanitary problems.

Tracts 154-19 and 20 have a house (locally known as the Laing house), 44 acres of open fields and orchard, and surround a privately owned graveyard. The fields are used for special events/group camping, and the house is used for NPS offices and storage space.

for adventurous rock-climbers. River-runners are the predominant users in this portion of the gorge. Fayette Station serves as the only public take-out at the north end of the national river. People who hunt and fish use the area much as they did before the national river was established. Remnants of old mining communities like Kaymoor have become destination points for those interested in hiking on area trails. Plans are also underway for the development of an environmental education center and NPS district offices at Burnwood.

The Fern Creek Falls trailhead parking area has been included in this plan because of safety problems resulting from road parking congestion that is caused by rock-climbers wanting access to an area known as the Endless Wall.

A concessioner provides bus tours from the Canyon Rim visitor center down the southwest side of the gorge to Fayette Station to see and interpret the gorge. These tours, on weekends during peak months, are not intended to provide public access to the river or area trails.

ISSUES AND CONCERNS

Within the study area, the narrow Route 82 winds down the steep slopes of the gorge, providing one of the few public access points to the gorge within the national river. However, crossing the New River on Route 82 has been prohibited since the Fayette Station bridge was condemned in 1977. Drivers on either side of Fayette Station bridge must turn their vehicles around near the river, at the Fayette Station bridge, which creates two-way/one-lane traffic on both sides of the gorge and forces drivers to pull off on the road shoulders to allow oncoming vehicles to pass. There are many hairpin curves, and people often park along the road shoulders to access scenic areas and trails.

Local residents, commercial whitewater rafting companies, private boaters, tourists, people who fish, hike, hunt, and climb rocks, and coal company employees use the road.

There are many safety issues to be addressed along this state-owned and maintained road, including

- narrow roadway widths
- substandard horizontal and vertical roadway curves
- steep gradients
- limited parking
- large coal trucks (on the road approximately every seven minutes),
- maneuvering/turning room and space for recreational vehicles and buses along the road and at Fayette Station bridge
- increasing volumes of traffic
- no traffic control devices at existing railroad crossing on east side of Fayette Station bridge

Infrequent special events, such as Bridge Day and Whitewater Wednesday, significantly increase local and tourist use of the area and exacerbate problems of conflicting use and needs among user groups.

The Fayette Station bridge, a steel truss bridge built in 1889, is an integral cultural and historical element of the area. Although not formally determined eligible for listing on the National Register of Historic Places, it is considered by the Park Service and the state historic preservation officer to be a historic structure. Closed to use because of severe structural deterioration, significant rehabilitation of this state-owned bridge and its piers would be required to make it safe for vehicular and pedestrian use. Visitors and residents ignore the posted warnings to keep off the bridge, and they climb through the barriers to see the river, swing with ropes, watch rafters run the rapids, and watch special

events such as Bridge Day. Injuries have occurred as a result of these activities.

Landownership and existing development are other issues in the study area; most of these issues are integrally tied to specific site developments. No known property maps clearly delineate the state right-of-way along Route 82.

RELATIONSHIP TO CURRENT PLANNING EFFORTS

Although Fayette Station was to be examined in the Teays plan, the comprehensive design for Fayette Station preceded the planning for the Teays area to more immediately address the rapidly increasing demand for take-out access by rafting interests in this area. The draft *Fayette Station Comprehensive Design/Environmental Assessment* was released to the public for comment in July 1992. Concerns by the state historic preservation officer about existing structures at Fayette Station have resulted in a reevaluation of the document, which will be rereleased to the public for review at a later date.

Previous documents that relate to New River Gorge National River and the Teays study area are summarized in appendix A.

In July 1992 Congress added \$4.2 million to the Department of the Interior Appropriation Bill (Public Law 102-381) to replace the Fayette Station bridge. The

money is to be used by West Virginia Department of Highways for design and construction. Repair, if structurally and economically feasible (the preferred alternative), or replacement if repair is not feasible, would significantly increase visitor use within the study area. The feasibility of repairing the bridge would be determined by the state Department of Highways based on available funding, the extent of deterioration, and discussions with the state historic preservation office. The Park Service would be a willing partner in this discussion. Cooperation between the state highway department and the National Park Service is critical to ensure that both visitor use and resource protection are adequately addressed.

Because federal funds will be used to stabilize/rehabilitate the state-owned bridge, the National Park Service will be responsible for coordination and/or oversight of all compliance procedures. The National Park Service will also be responsible for the completion of all section 106 compliance documents as called for in the 1990 programmatic memorandum of agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers. The state Department of Highways will be responsible for developing the National Environmental Policy Act component of the environmental compliance document(s).

DEVELOPMENT CONCEPT ALTERNATIVES

Two alternatives are considered.

Alternative A: No Action — Maintain the existing NPS management direction.

Alternative B: Preferred — Based on stabilizing, rehabilitating, and reopening the Fayette Station bridge to pedestrian and one-way vehicular traffic, if feasible. If bridge repair is not feasible, the Park Service would recommend replacing the bridge with a structure that reflects the historic context of the area.

The state owns and controls the Route 82 corridor, including the Fayette Station bridge. Any actions taken to implement a long-range solution for the bridge and Route 82 would need to be the result of actions taken by the Department of Highways in cooperation with the National Park Service. Any construction activities taking place along the Route 82 corridor would need to begin with discussions between the state and the National Park Service because the state right-of-way varies in width and is not delineated on existing property maps. The National Park Service is committed to working with the state to achieve the objectives outlined in the *General Management Plan* and other relevant NPS planning documents that call for the preservation of the Fayette Station bridge, if feasible, for its historical, recreational, and functional values (see appendix A).

Under all alternatives the primary concern of the Park Service regarding development in the study area would be to minimize impacts on the environment. Also, acquisition of private lands within the legislated boundary will continue under the current

policies and priorities established for New River Gorge National River.

INTERPRETATION

Development of any NPS area involves considerations for designing an interpretive program. Interpretation is a process of education that is designed to stimulate curiosity and understanding and convey messages to the visiting public. This can be done through various methods and media — museum exhibits, wayside exhibits, rangers giving interpretive talks, signs, etc. Two of the five interpretive themes identified for the national river are applicable to this project.

(1) The New River Gorge National River today represents a change in America's values and the perception of wildlands over the last 200 years — from that of wilderness as a barrier to human progress to that of wildlands for inspiration and recreation.

(2) New River Gorge exemplifies the rapid industrialization of America at the turn of the 20th century. This industrialization prompted major man-made changes in the gorge's ecosystem and in the appearance of the landscape.

Interpretive media and personal services described below under the alternatives will address these themes and provide visitors with information regarding recreational opportunities, safety, and regulations. Under any of the alternatives, signs, wayside exhibits, and bulletin cases would be consistent with the overall design of these features for the national river.

ALTERNATIVE A: NO ACTION

General Description

This alternative describes a continuation of current management of the study area. No activities are proposed that would affect state management of Route 82 or Fayette Station bridge. To provide a comparison between alternatives and because specific details have yet to be worked out regarding the repair, if feasible, of the Fayette Station bridge, this alternative assumes the bridge will stay in its existing condition.

Public Transportation

Interpretive bus tours down the southwest side of the gorge to Fayette Station would continue to be provided by the existing concessioner.

Site Development

Site development under this alternative would be as follows (see Alternative A, No Action map).

State Route 82 — No federal action. The state would continue to maintain the road as a two-way/one-lane road. The National Park Service recommends that the state Department of Highways discuss installing traffic control devices at the intersection of the railroad and Route 82 at Fayette with CSX Railroad.

New River Bridge Trailhead — Because the usable parking area at the Wolf Creek trailhead is limited, the New River Bridge trailhead is being developed to serve people who will hike from the New River Bridge trailhead to the Wolf Creek trailhead and on to Kaymoor. (Development of this trailhead under this alternative is a result of actions already being taken as

recommended in the *Draft Trail Plan, New River Gorge National River* [NPS 1992a]).

A portion of the existing disturbed area adjacent to Route 82 would be graveled, and parking would be delineated for about 16 vehicles. Signs and a bulletin case would be established at the trailhead. Repair and maintenance continue on the trail from the proposed New River Bridge trailhead to the Wolf Creek trailhead.

Wolf Creek Trailhead — No action. The trailhead would continue to provide a parking area for those hiking to Kaymoor. In this alternative the existing bulletin case at the trailhead would remain, and information on the trail, safety, and regulations would continue to be provided.

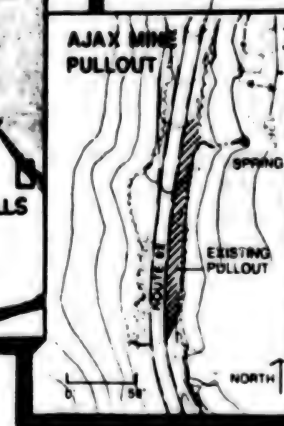
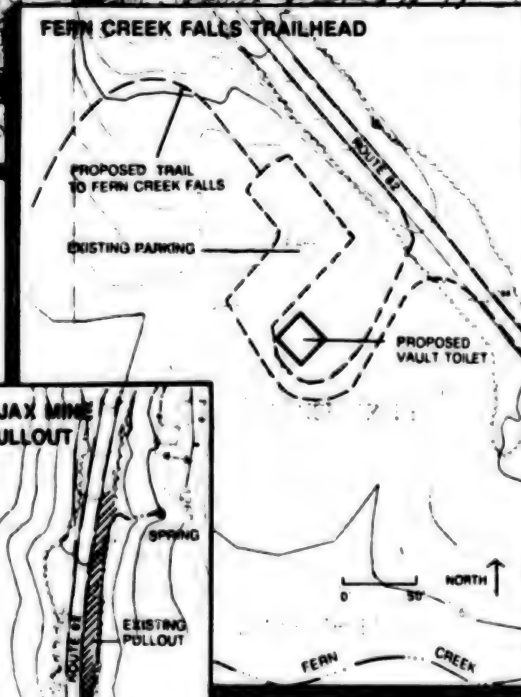
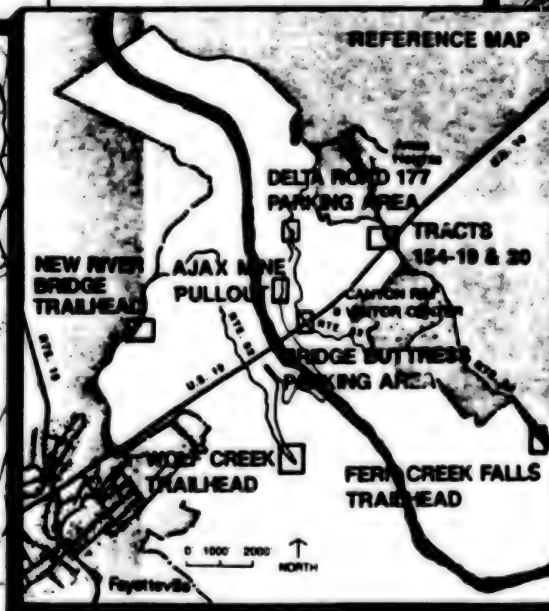
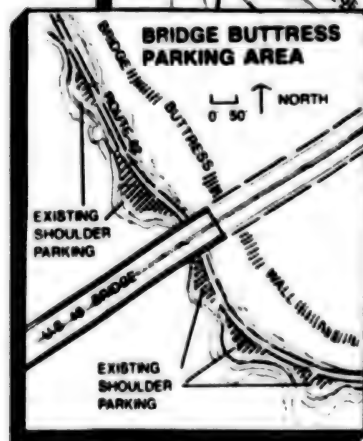
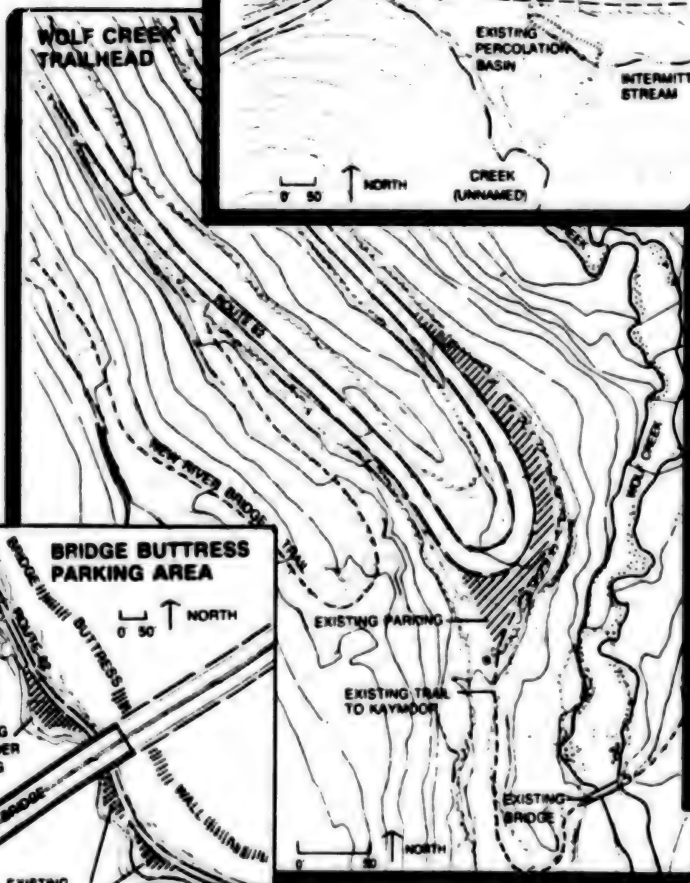
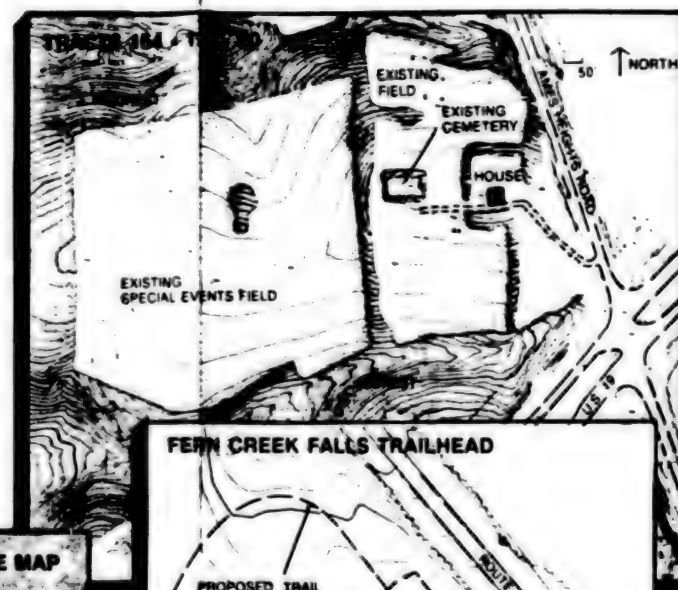
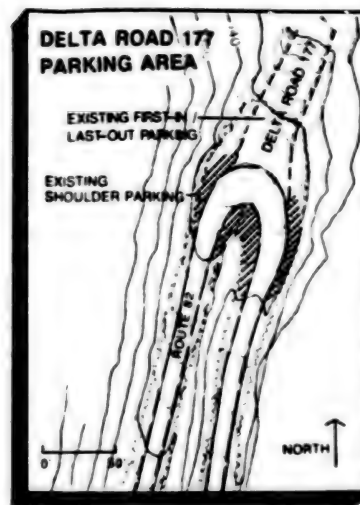
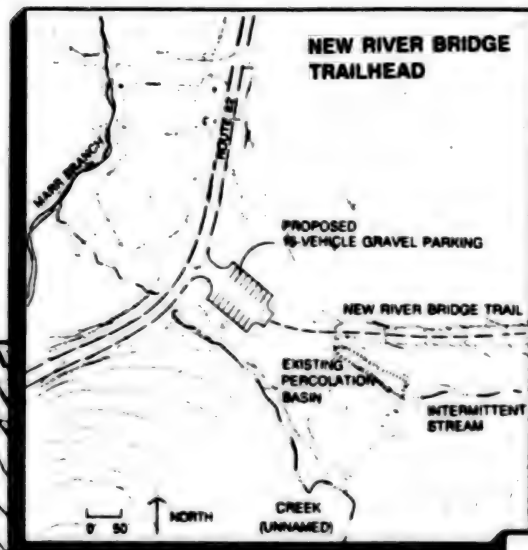
Fayette Station Bridge — No federal action. The state-owned bridge is closed because of structural deficiencies. The Park Service would seek permission from the state to install NPS wayside exhibits on both ends of the bridge. The exhibits would interpret the significance of the old bridge, the U.S. 19 bridge, the railroad lines, and the former community of Fayette as they relate to the primary themes of the national river (as outlined in the approved *Canyon Rim Visitor Center Interpretive Prospectus* [NPS 1988c]).

Ajax Mine Pullout — No action.

Delta Road 177 Parking Area (Burma Road) — No action.

Bridge Buttress Parking Area — No action.

Fern Creek Falls Trailhead — Current management plans include replacing the seasonally installed chemical toilet with permanent vault toilets. Implementation of the trail plan includes eventual construction of a trail from the parking area to Fern Creek Falls.



**ALTERNATIVE A
NO ACTION
TEAYS STUDY AREA**

NEW RIVER GORGE NATIONAL RIVER

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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A new bulletin case at the parking area would provide information about rock-climbing, the Fern Creek Falls trail, and camping facilities outside of the national river. This information could help alleviate current use of this area by rock-climbers as an unauthorized camping area.

Tracts 154-19 and 20 — No action. The house would continue to be used for NPS administrative use. Any future use of this area would be coordinated with development of the proposed environmental education center and NPS district offices in the Burnwood area, as outlined in the *Canyon Rim/ Burnwood Development Concept Study/Environmental Assessment* (NPS 1988a).

Costs

Total implementation, staffing, maintenance, and development costs to implement this alternative would be \$169,794, including costs for interpretive planning and media. See appendix D for details.

ALTERNATIVE B: PREFERRED

General Description

The preferred alternative is based on

- current NPS planning and management objectives
- public comments
- recent congressional appropriation for the Fayette Station bridge
- establishment of a dialogue with the state Department of Highways regarding resolution of the issues surrounding

(1) the repair, if feasible, of the Fayette Station bridge for vehicular and pedestrian traffic — or if repair is not possible, replacing the bridge with a structure that reflects the area's historic context

(2) the determination of the state-right-of-way boundary along Route 82 because actions taken at the New River Bridge, Wolf Creek and Fern Creek Falls trailheads, Fayette Station, the Fayette Station bridge, the Ajax mine pullout, and the Delta Road 177 and bridge buttress parking areas are all contingent on agreement by the state

- the subsequent designation by the state of Route 82 as a one-way, eastbound road from the mine entry road on the west side of the gorge to Route 85/3 on the east side (all other portions would remain two way).

Public Transportation

Interpretive bus tours to the river would continue to be provided by the existing concessioner. The existing tour bus system might need to be expanded. The tours would include both sides of the gorge because of the one-way road system.

Shuttle Service

To alleviate summer traffic congestion during peak use times, a concession-operated shuttle service would be established to provide the public with another option to access the gorge. The shuttle would provide easy access for day users within the gorge. Equipment for private boaters, such as kayaks or rafts, could be attached to the shuttle buses. A shuttle system would make it easier to control undesignated parking along road shoulders in the gorge, thus improving

traffic and safety conditions along the one-way road.

The main shuttle parking area would be at the New River Bridge trailhead (see description below). Designated shuttle stops would be established at the New River Bridge and Wolf Creek trailheads, Fayette Station, the bridge buttress and Delta Road 177 parking areas, and the Canyon Rim visitor center. Shuttles would be stored and serviced at an off-site concessioner facility. Shuttles would operate during peak use periods (from Memorial Day to Labor Day), a minimum of Fridays through Sundays, on holidays, and during special events. Shuttle rides would be advertised at the visitor center and possibly at the various river outfitter establishments. Staging for the shuttle would be at the New River Bridge trailhead.

This operation would be separate from the existing tour bus service that provides interpretive tours of the gorge.

Site Development

Site development under this alternative would include the following (see Alternative B Preferred Development map).

State Route 82 — It will be the state historic preservation officer's responsibility to analyze and determine the historical significance, if any, of Route 82. The effects of and mitigations for any improvements to the route would be the state Department of Highways' responsibility whether or not the road is determined to be eligible for the National Register of Historic Places. The Park Service would recommend to the state Department of Highways that improvements be designed to minimize visual impacts to the road corridor and blend with the surrounding environment.

The National Park Service would discuss the following proposals with the state Department of Highways:

Making Route 82 from the mine entry road on the southwest side of the gorge to Route 85/3 on the Canyon Rim side of the river a one-way eastbound road.

Widening the road between the New River Bridge trailhead and the coal mine entry road, where feasible, to accommodate two-way/two-lane traffic (assuming that the coal mine continues to operate after the implementation of this plan). Where the topography does not permit two lanes, other options with some sort of traffic control system might be required as determined by the state. If the coal mine ceases operation before implementation of this plan, widening the road would not be necessary.

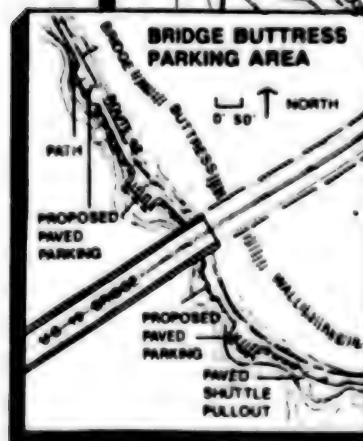
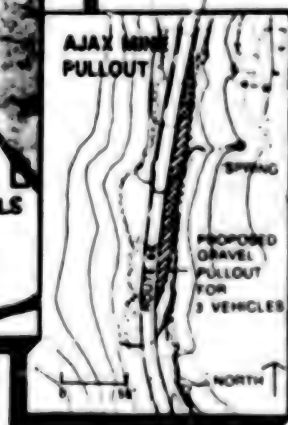
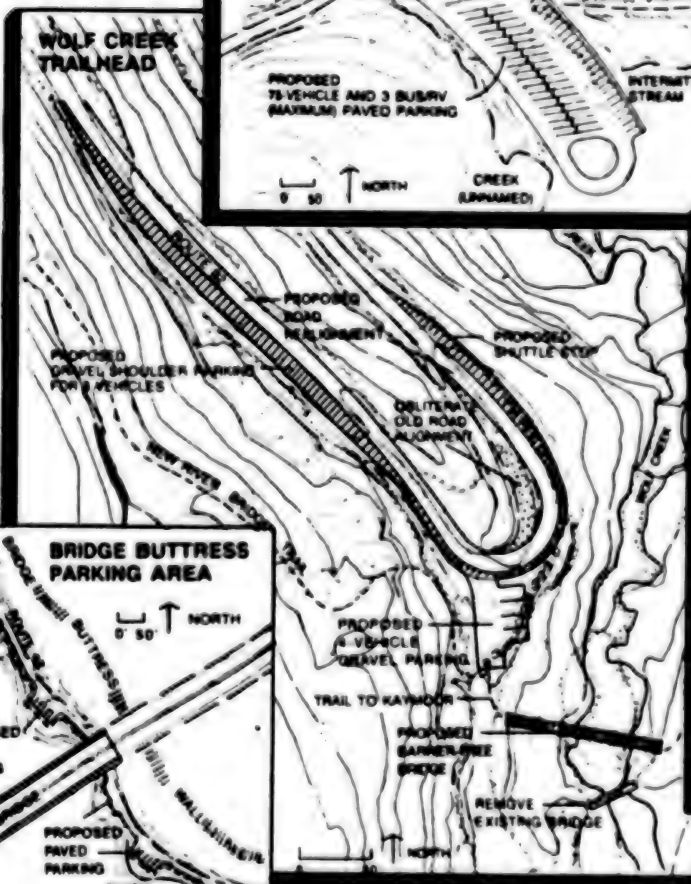
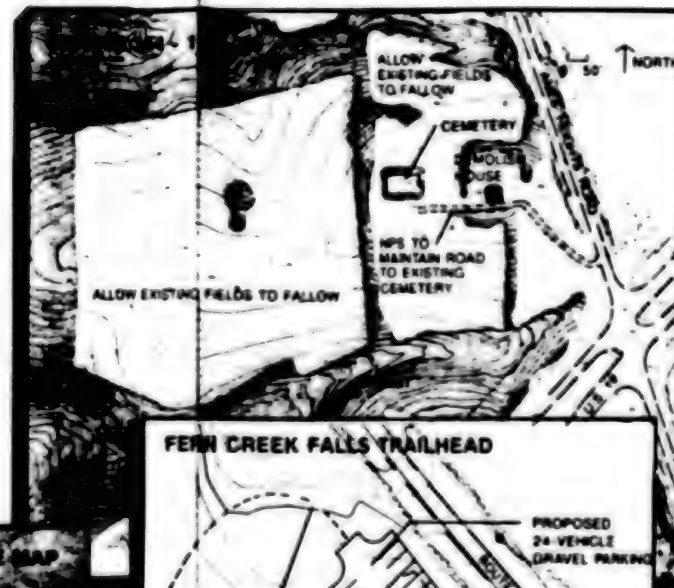
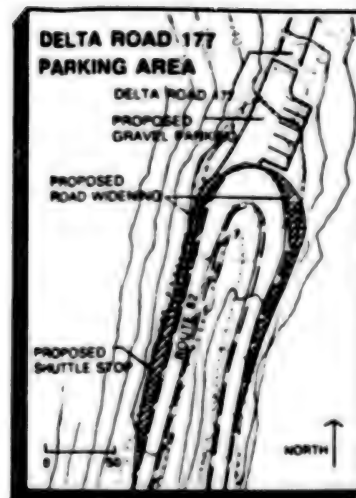
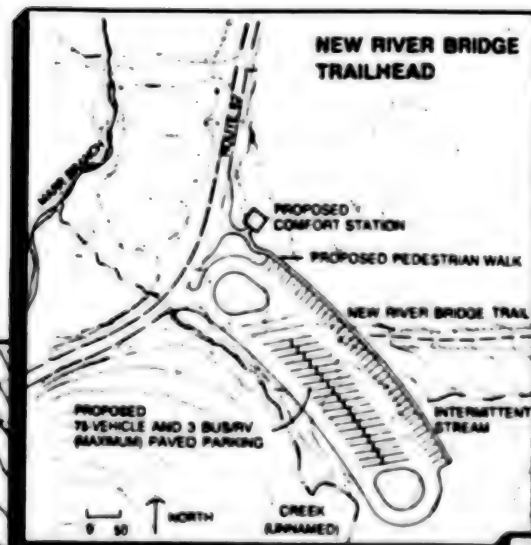
Keeping about 900 feet of the road, also at Fayette Station, as a two-way road to provide circulation between the proposed development areas (see NPS 1992b).

Working with CSX Railroad to install traffic control devices at the intersection of the railroad and Route 82 at Fayette.

Making limited improvements to the condition of the road in the study area by providing guardrails and pullouts, where appropriate, widening curves, and reconstructing substandard hairpin turns.

New River Bridge Trailhead — At this site the Park Service would design and construct a paved parking/staging area (initially for 35–50 vehicles) for public use, shuttles, recreational vehicles, vehicles with private boats, etc. Development of the parking area to a 75-vehicle capacity could be phased in over time as demand for shuttle and trailhead parking space grows.

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**ALTERNATIVE B
PREFERRED
TEAYS STUDY AREA**

NEW RIVER GORGE NATIONAL RIVER

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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Because the usable parking area at the Wolf Creek trailhead is limited, the New River Bridge trailhead would also serve people who would hike from the New River Bridge trailhead to the Wolf Creek trailhead and on to Kaymoor.

The following actions would also be implemented at the New River Bridge trailhead:

Provide comfort station and sewage pumping station; tie into nearby public water and sewer systems. (The existing sewage system is overburdened, and the Park Service would not connect into this system until the sewage treatment facility has been upgraded, which is scheduled for July 1994.)

Replace existing riprap percolation basin and restore natural drainage pattern by providing headwall and culvert under the parking area.

Provide bulletin cases for shuttle schedules and hiking and safety information and regulations.

Provide trailhead signs.

Conduct a site-specific delineation of the 100-year floodplain for the Marr Branch tributary prior to design (because of the low statistical accuracy of the current delineation).

Wolf Creek Trailhead — At this trailhead the graveled parking area would be delineated for as many cars as possible without significantly impacting resources (two to four vehicles). At least one space would be designated for visitors with disabilities.

The nonhistoric footbridge across Wolf Creek (constructed in the 1980s) would be dismantled, and a 130-foot footbridge would be constructed about 50 feet downstream from the existing footbridge. The

new footbridge would be a barrier-free structure that would eliminate steps. The footbridge would be above the 100-year floodplain. Prior to design, a site-specific delineation of the floodplain would be done to ensure that construction of the footbridge would be outside the 100-year floodplain. The removal and replacement of the existing footbridge with a barrier-free footbridge would require consultation with the state Public Lands Corporation and the U.S. Army Corps of Engineers with regard to section 404 of the Clean Water Act.

Trailhead signs and a bulletin case would be replaced. Regulations and information on safety in the bulletin case would be for hikers on the trails to the New River Bridge trailhead and Kaymoor.

The National Park Service would discuss with the state

the possibility of providing additional parking (eight vehicles) along the fill shoulder of the road uphill from the parking area as well as a shuttle pullout area downhill from the designated parking areas

Fayette Station Bridge — Because of the state ownership of this potentially historic resource, the analysis of its historic context and the determination of eligibility to the National Register of Historic Places would be the state historic preservation officer's responsibility with NPS oversight. However, because federal funds (U.S. Department of the Interior) would be used, the National Park Service would be solely responsible for section 106 compliance, including analysis of the effects on the historic integrity of the bridge.

The National Park Service would discuss the following options with the state:

Option 1 — Retain the existing bridge, if feasible, for pedestrian and one-way, eastbound, vehicular traffic. Pedestrian access might need to be cantilevered off the downstream side of the bridge if the current decking is not wide enough to accommodate both vehicular and pedestrian activities. It is suggested that the deteriorated historic fabric would be repaired with like construction materials. Utility lines could be attached under the deck structure of the bridge to remove them from the downstream view.

Option 2 — If option 1 is not possible, the Park Service recommends that as much of the historic structure be retained as possible, replacing portions with like construction materials to provide for pedestrian and one-way vehicular traffic.

Option 3 — If options 1 and 2 are not possible, the bridge should be removed and another constructed in the same location. This new bridge should accommodate pedestrians and one-way eastbound vehicular traffic. To maintain the visual quality and historical context of the area, the National Park Service recommends that the new bridge be a steel-trussed bridge. If the bridge is not rebuilt in its present location, the state would need to acquire additional right-of-way access rights from CSX, the Park Service, and any private landowners whose land would be impacted.

If any of the options calling for repair or replacement of the Fayette Station bridge are chosen, consultation with other state agencies and the U.S. Army Corps of Engineers would be required with regard to sections 401 and 404 of the Clean Water Act. Archeological survey work at the Fayette side of the bridge, done in coordination with the state historic preservation officer, would be required under any of these options.

As in alternative A, the Park Service would seek permission from the state Department of Highways to install NPS wayside exhibits on both ends of the bridge.

Ajax Mine Pullout — The National Park Service would discuss with the state widening the graveled pullout to safely handle three vehicles.

Delta Road 177 Parking Area — Contingent upon NPS acquisition of the junkyard wall and access to it, the Park Service would discuss the following actions with the state Department of Highways:

- providing a designated upgraded parking area (graveled) along existing roadbed for about five vehicles (based on resource capacity), and gate the road at the end of the parking area

- providing a bulletin case with information about area rock-climbing opportunities and nearby camping areas

- providing a shuttle pullout area

- installing guardrails around the hairpin curves to prohibit parking along the road within these areas

Bridge Buttress Parking Area — The Park Service would discuss the following actions with the state Department of Highways:

- paving four of the five pullouts as designated parking areas along the road shoulder for a combined total of 18 vehicles

- paving the fifth area for a shuttle pullout

- provide a gravel path that would parallel Route 82 and connect the shuttle stop and parking areas to the access point for the bridge buttress wall

The Park Service would seek permission from the state to develop and install bulletin cases in the shuttle pullout area and in the two largest parking areas with information about rock-climbing opportunities, the shuttle system, and nearby camping areas.

Fern Creek Falls Trailhead — Development in this area is contingent on building the proposed Fern Creek Falls trail as outlined in the *Draft Trail Plan* for New River Gorge National River. Development within this area would include the following:

- expanding the graveled parking area around the old roadbed (capacity would depend upon resource capacity, but has been estimated at about 24 vehicles)

- replacing chemical toilet with vault toilets

- providing a new bulletin case with information about the trail system, rock-climbing, and camping facilities outside the national river boundary

The National Park Service would discuss the following actions with the state:

- options to prevent current road shoulder parking problems (widening the road shoulder along Route 82 for additional parking, installing guardrails to prevent shoulder parking, etc.)

Development at the Fern Creek Falls trailhead would be close enough to the 100-year floodplain to warrant a site-specific delineation of the 100-year floodplain prior to design.

If the National Park Service acquires the additional properties at the Endless Wall that are used by rock-climbers, the potential for developing a series of smaller

parking areas to disperse access, use, and impacts of rock-climbers would be studied.

Tracts 154-19 and 20 — At this site the Park Service would either demolish the house or offer the house for sale (and removal), discontinue special uses such as group camping on 31 acres (tract 154-20), and allow all fields to fallow (the fields would not be mowed). Prior to demolition or sale and removal of the house, surveys for archeological resources, asbestos-containing materials, and lead-based paint would be required. Regulations for removing asbestos-containing materials and lead-based paint would be followed if these substances are found. Any future use of this area would be considered as part of the environmental education component of the *Canyon Rim/Burnwood Development Concept Plan*. The Park Service would maintain the road access to the privately owned cemetery.

Group camping would be accommodated at nearby public campgrounds. Permits could be requested for special events at Burnwood, pending development of the environmental education center.

Current NPS uses of the house would be relocated to other existing structures in the national river.

Because the house was determined to be ineligible for the National Register of Historic Places (see appendix E and "Determination of Eligibility" [NPS 1993]), cultural compliance procedures are complete. However, archeological survey work would still be required for any ground-disturbing actions.

Costs

Total implementation, staffing, maintenance, and development costs to implement this alternative would be \$1,317,465,

including costs for interpretive planning and media. See appendix D for details.

MITIGATING MEASURES

Guidelines for sustainable design have been established by the National Park Service for use in all planning efforts throughout the national park system. Although many of the individual components of sustainable design are not new, there is still much to learn regarding the practical application of viable techniques that emphasize a biocentric perspective (the structural function of the environment and how humans fit into that system) rather than how the environment fits into human needs. Mitigating measures discussed below include applicable components of sustainable design.

Erosion control plans consistent with state and federal regulations would be implemented at the design phase. Revegetation of roadbanks and disturbed soil areas would be facilitated by conserving existing topsoil and using it in revegetation efforts to prevent bringing unwanted exotic plant material in imported topsoil. Topsoil storage should be limited to 6–12 months because seed and root viability are lost if soil is stored for longer periods. Standard mitigating measures, such as vegetation buffers, silt screens, log check dams, sediment traps, and other barriers, would be used to reduce erosion and prevent significant short-term deterioration of water quality during construction.

To eliminate the construction of walls, stabilize steep slopes, and prevent excessive erosion, the use of vegetative stabilization, i.e., bioengineering, should be explored.

Drainage cross sections would be maintained or enlarged to avoid impacts to floodplains. Retaining walls would also be used in drainages to reduce the amount of

fill in floodplains. Every effort would be made to retain the natural hydrological patterns of the sites.

Where revegetation is required, native plant material would be used, if available, and vegetative management techniques would be implemented to eliminate exotic species. Patterns of planting should mimic native growth patterns. Native grass seed would be used if available, although nonnative nurse species (species that only last one season and stabilize the soil but do not reproduce) could be used until native species return naturally. Other plant material used should be as genetically similar as possible to what is in the gorge. All plant material used for revegetation would need to be approved by the national river resource specialist. When development proves to be a visual intrusion (particularly at the New River Bridge trailhead), vegetation buffers would be used to screen the development site from view as much as possible.

Spills from construction equipment would be reduced or prevented from entering waterways through the use of barriers in gullies, ditches, and low drainage areas. Adequate cross-drains would be developed to ensure proper drainage.

Work activities should be scheduled to accommodate critical periods of wildlife use within the study area. Important habitat features would be conserved or enhanced where possible.

Work activities should be scheduled to coincide with the months of moderate or low rainfall because of the erosion potential on steep slopes within the study area.

If air quality was threatened, water spraying along roadway construction would be used to reduce dust.

On federal lands, detailed surveys would be made and appropriate habitats searched for the presence of rare, threatened, and endangered species (including their critical habitat) prior to implementation of any proposed actions. (The state would be responsible for such surveys on their lands.) Clearances from the U.S. Fish and Wildlife Service and the state Department of Commerce, Labor and Environmental Resources, would be obtained before any actions under this alternative were implemented.

Techniques and procedures to mitigate possible impacts on rare, threatened, or endangered species would be developed in consultation with the U.S. Fish and Wildlife Service and the state and followed during construction activities. At a minimum, visitor education and interpretation of peregrine falcons and the reintroduction program would be available when peregrines are in the study area, especially at Fern Creek.

Paved parking areas would be constructed using a permeable, no-fines asphalt that would help mitigate the loss of soil resources by reducing erosion and channelization from stormwater runoff. Storm water is allowed to percolate into course aggregate detention basins beneath the pavement, which mitigates direct stormwater runoff into tributaries and the New River and allows for groundwater recharge of the aquifer. Because water passes through the paving, there should be no

damage from heavy frosts. Permeable paving installed at the Morris arboretum in Philadelphia has not suffered from weather extremes and has held up as well as the regular asphalt paving installed adjacent to it (pers. comm. with Bob Anderson of Morris arboretum 7/7/93).

A determination of eligibility has been completed for the house (Laing house) on tract 154-19 (NPS 1993). This property is ineligible for listing on the National Register of Historic Places. Compliance is therefore complete, and the house may be removed.

If it is not possible to rehabilitate/stabilize the Fayette Station bridge for adaptive reuse and the structure is to be removed, documentation by the Historic American Engineering Record branch of the National Park Service will need to be completed before its removal. Coordination among the National Park Service, the state historic preservation office, and the Advisory Council on Historic Preservation should occur throughout this action.

If any actions under any of the alternatives affect significant archeological sites, development areas would be reconsidered. If impacting an archeological site is unavoidable, compliance procedures would be followed. If any archeological resources are found, they would be documented and maintained according to NPS guidelines and standards.

TABLE 1. SUMMARY OF ALTERNATIVES

	ALTERNATIVE A: NO ACTION	ALTERNATIVE B: PREFERRED
PUBLIC TRANSPORTATION	Continuation of existing concessioner bus tour operation.	- Continuation of existing concessioner bus tour operation. - Establish concession-operated shuttle service during peak use periods, holidays, and special events, with staging area at New River Bridge trailhead. Shuttle stops also at Wolf Creek trailhead, Fayette Station, the bridge buttress and Delta Road 177 parking areas, and Canyon Rim visitor center.
STATE ROUTE 82 (State owned and maintained)	- No federal action. Remains two-way/one-lane road. - The Park Service recommends that the state discuss installing traffic control devices at the intersection of the railroad and Route 82 at Fayette with CSX Railroad.	Discuss with the state: - Making Route 82 one-way eastbound from the mine entry road south to the intersection with Route 85/3 (a 900-foot segment at Fayette Station would need to remain two-way). - Widening the road from New River Bridge trailhead to coal mine entry road for two-way traffic. - Improving road conditions — provide guardrails and pullouts where appropriate, widen curves, and reconstruct substandard hairpin turns. - The Park Service recommends that the state discuss installing traffic control devices at the intersection of the railroad and Route 82 at Fayette with CSX Railroad.
NEW RIVER BRIDGE TRAILHEAD	- Provide graveled trailhead parking in existing disturbed area for about 16 vehicles for trail to Wolf Creek and extension to Kaymoor. - Provide signs and bulletin case for trails to Wolf Creek and Kaymoor.	- Provide paved trailhead parking for Wolf Creek and Kaymoor trail extension and staging area for public use and proposed shuttle (phased, with no more than 75 vehicles). - Provide comfort station and pumping station; tie into nearby water and sewer systems. - Replace riprap percolation basin and restore drainage pattern. - Provide bulletin cases for shuttle and hiking information. - Provide trailhead signs. - Delineate 100-year floodplain.

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TABLE 1. SUMMARY OF ALTERNATIVES (CONT.)

	ALTERNATIVE A: NO ACTION	ALTERNATIVE B: PREFERRED
WOLF CREEK TRAILHEAD	No action. (Note: Wolf Creek trail is being repaired under guidelines established in the <i>Draft Trail Plan</i>.)	- Provide graveled parking for about four vehicles. - Delineate 100-year floodplain. - Replace footbridge with barrier-free structure; elevate above 100-year floodplain. - Consult with state and Army Corps of Engineers regarding sections 401 and 404 of Clean Water Act. - Replace trailhead signs and bulletin case. Discuss with the state: - Providing additional parking along fill shoulder uphill from parking area (eight vehicles). - Providing shuttle pullout downhill from designated parking areas.
FAYETTE STATION BRIDGE (State owned)	- No federal action. State bridge would continue to be closed. - Seek permission from the state to provide NPS wayside exhibits on both ends of the bridge.	- Seek permission from the state to provide NPS wayside exhibits on both ends of the bridge. - State would consult with Army Corps of Engineers regarding section 404 of Clean Water Act. - Park Service would conduct archeological surveys at Fayette. Discuss with the state: - Retaining bridge for pedestrian and one-way vehicular use through stabilization and rehabilitation, if feasible (or replacement or removal and reconstruction in the same location if repair is not possible). - Attaching utility lines under bridge to remove them from the downstream view. - Conducting archeological surveys at Fayette.
AJAX MINE PULLOUT	No action.	Discuss with state: Widening graveled pullout for three vehicles.

TABLE 1. SUMMARY OF ALTERNATIVES (CONT.)

	ALTERNATIVE A: NO ACTION	ALTERNATIVE B: PREFERRED
BRIDGE BUTTRESS PARKING AREA	• No action.	The Park Service would discuss with the state • paving four of the five shoulder pullouts as designated parking areas for a total of 18 vehicles • providing a paved shuttle pullout in the fifth pullout area • providing a path to connect the shuttle stop and parking areas with the access point for the bridge buttress wall The Park Service would seek permission from the state to provide bulletin cases at the shuttle pullout and in the two largest parking areas with information about rock-climbing, the shuttle, and nearby camping.
FERN CREEK FALLS TRAILHEAD	• Construct vault toilets to replace chemical toilet. • Provide bulletin case with information about rock-climbing, the trail, and camping facilities outside national river. (Note: Fern Creek Falls trail would be constructed under guidelines established in the <i>Draft Trail Plan</i>.)	Contingent on construction of the proposed Fern Creek Falls trail, proposals would be as follows: • Expand the graveled parking area around the old roadbed (for about 24 vehicles). • Construct vault toilets to replace chemical toilet. • Provide new bulletin case with information about trail system, rock-climbing, and camping facilities outside national river boundary. • Delineate 100-year floodplain. If Park Service acquires properties adjacent to this section of the Endless Wall, study potential for developing a series of smaller parking areas. The Park Service would discuss with the state: • Options to prevent road shoulder parking problems. (Note: Fern Creek Falls trail would be constructed under guidelines established in the <i>Draft Trail Plan</i>.)

TABLE 1. SUMMARY OF ALTERNATIVES (CONT.)

	ALTERNATIVE A: NO ACTION	ALTERNATIVE B: PREFERRED
TRACTS 154-19 and 20	• No action; retain and continue function of Laing house as NPS administrative offices. • Other future use of this area would be considered part of the <i>Canyon Rim/Burnwood Development Concept Plan</i>.	• Either demolish house or offer for sale (and removal) (after proper surveys) and allow fields to fallow. • Relocate special uses such as group camping. • Park Service would conduct archeological surveys. • Other future use of this area would be considered part of the <i>Canyon Rim/Burnwood Development Concept Plan</i>.
COSTS	\$169,794	\$1,317,465

ALTERNATIVES CONSIDERED BUT REJECTED

Two development concept alternatives were considered but rejected.

WIDENING ROUTE 82 TO TWO LANES

This alternative was based upon widening Route 82 throughout the gorge from a one-lane to a two-lane road to handle traffic coming from either direction. This alternative was explored in the Federal Highway Administration engineering study for this area (Federal Highway Administration 1987). The study concluded that excavation required under this alternative "will be extensive."

A field review of this alternative was conducted by the planning team and national river staff. Based on the review, it was decided that the environmental degradation created by the massive cuts and fills, retaining walls, and other construction activities associated with the project could not be justified. The same conclusion was reached about a variation of the concept that involved the construction of an additional one-lane road paralleling the existing one.

UPGRADING FACILITIES AND REPAIRING BRIDGE FOR PEDESTRIAN TRAFFIC

This alternative emphasized keeping Route 82 as a one-lane/two-way road, upgrading facilities, parking areas, and vehicle pullouts along Route 82 where possible, and continued dialogue with the state regarding the repair of the Fayette Station bridge, if feasible, for pedestrian traffic only. Under this alternative, if repair of the bridge is not feasible because of public safety issues, bridge piers could be

stabilized and the bridge decking could be removed to prohibit pedestrian use.

Subsequent to the development of this alternative, a congressional appropriation for the bridge replacement was made so this option was no longer considered a viable action alternative. However, this alternative is presented in its entirety to display a full range of alternatives. Should this alternative be reconsidered in the future, an evaluation of its affects would need to be documented. Under these circumstances, compliance under the National Environmental Policy Act would need to be completed on this alternative.

The National Park Service would discuss traffic control along Route 82 with the state.

Public Transportation

Interpretive bus tours down the southwest side of the gorge to Fayette Station would continue to be provided by the existing concessioner.

Shuttle System

A concession-operated shuttle system similar to that outlined in alternative B would be established, except that under this alternative discussions with the state would need to take place regarding possible options for restricting traffic access during peak use times.

The shuttle service would operate during peak use periods, a minimum of Fridays through Sundays, on holidays, and during special events. The main shuttle parking area would be at the New River Bridge trailhead (see trailhead description below).

Designated shuttle stops would be established at the New River Bridge and Wolf Creek trailheads and Fayette Station. Shuttles would be stored and serviced at an off-site concessioner facility.

With the possibility of vehicle access restrictions and limited parking on the road, the existing tour bus system might need to be expanded above present levels. The availability of the bus tours and a shuttle system would be advertised at the visitor center and possibly at the various river outfitter establishments.

Site Development

State Route 82 — The National Park Service would discuss the following proposals with the state:

- Closing Route 82 to vehicular traffic between Fayette Station day use area and the old Fayette Station bridge and maintaining the road as a trail to the bridge.
- Widening Route 82 for two-way/two-lane traffic from New River Bridge trailhead to the coal mine entry road where possible if the coal mine continues to operate after the implementation of this component of the plan. Where the topography would not permit two lanes, other options with some sort of traffic control system might be required.
- Working with CSX Railroad to install traffic control devices at the intersection of the railroad and Route 82 at Fayette.
- Improving road conditions — provide guardrails and traffic pullouts where appropriate, widen curves, and reconstruct substandard hairpin turns.

- Restricting vehicular access during times of peak visitation because of safety, resource concerns, and design issues.

New River Bridge Trailhead and Parking

— A paved parking/staging area for public use including the proposed shuttle (for a maximum capacity of about 106 vehicles and 3 buses/recreational vehicles) would be provided. Parking/staging areas would be designed to accommodate proposed concessioner shuttle services, recreational vehicles, private boaters, etc. Development of the parking area to the maximum capacity could be phased in over time as demand for shuttle parking space grows.

Trailhead parking for the Wolf Creek and Kaymoor trails, a comfort station (which would tie into nearby water and sewer systems), a headwall and culvert under the parking area (to restore natural drainage pattern from existing percolation basin), a bulletin case for shuttle schedules and safety and hiking information/regulations, and trailhead signs and waysides would also be provided.

Wolf Creek Trailhead — Without significantly impacting natural resources at the site, a paved parking area for as many cars as the limited space will allow (two to four vehicles) would be provided. Pending successful discussions with the state, there would also be a shuttle pullout area. The footbridge across Wolf Creek would be dismantled and a 130-foot-long footbridge would be constructed about 50 feet downstream from the existing footbridge. The new footbridge would be a barrier-free structure that would eliminate steps. Trailhead signs, waysides, and bulletin case, with information for hikers on safety and regulations, would be replaced.

Fayette Station Bridge — The National Park Service would discuss the following actions with the state:

- Rehabilitating the bridge for pedestrian use only, contingent upon the development of a shuttle system. If rehabilitating the bridge is not feasible, stabilizing the pier(s) but removing bridge planking to eliminate pedestrian use.
- Permission for providing NPS wayside exhibits on both ends of the bridge, as outlined in the approved *Canyon Rim Visitor Center Interpretive Prospectus*.

State Route 82 Turnaround (north side of gorge) — The Park Service would discuss the following actions with the state:

- Providing gravel turnaround for vehicles at pullout area before the CSX tracks.
- Providing nearby parking for about eight vehicles.
- Restricting vehicle access beyond turnaround to private property owners, CSX, the state, the Park Service, and emergency vehicles but permitting use of the road as a trail to the bridge.

Ajax Mine Pullout — The National Park Service would discuss paving a pullout for three vehicles with the state.

Delta Road 177 Parking Area — Contingent on NPS acquisition of the junkyard wall and adjacent areas, the Park Service discuss the following actions with the state:

- Providing designated upgraded parking area (graveled) along old road bed for about five vehicles (based on resource capacity), and gate road access at the end of the parking area.
- Providing bulletin case with information about area rock-climbing opportunities and nearby camping areas.

- Installing guardrails around hairpin curves on Route 82 to prohibit parking along the road within these areas.

Bridge Buttress Parking Area — The Park Service would discuss the following actions with the state:

- Paving all five existing pullout areas and delineating parking spaces for 20 vehicles
- Providing a graveled path paralleling Route 82 that would connect the shuttle stop and parking areas to the access point for the bridge buttress wall
- Permission for providing bulletin cases in the two largest parking areas with information about rock-climbing opportunities and nearby camping areas.

Fern Creek Falls Trailhead — The parking area around the old roadbed (size will depend upon resource capacity, but for this alternative would be estimated at about 30 vehicles) would be expanded and paved. Vault toilets and a bulletin case with information about rock-climbing, trail information, and camping facilities outside the national river boundary, would also be provided.

If the National Park Service acquires the additional properties at the Endless Wall that are used by rock-climbers, the potential for developing a series of smaller parking areas and trails to disperse access, use, and impacts of rock-climbers would be studied.

The National Park Service would discuss the following actions with the state:

- Options to prevent current road shoulder parking problems (widening the road shoulder along Route 82 for additional parking, installing guardrails to prevent shoulder parking, etc.).

Tracts 154–19 and 20 — The house, on tract 154–19, was part of the original Thomas farm and is being used for park administrative purposes. An alternative that considered use of the house as an interpretive facility was rejected because the property no longer reflects a farmstead. Furthermore, because this is not the original farmhouse of the Thomas farm and no support outbuildings are present, the feeling and association of the original 122-acre farm no longer exist in the 44 acres of tracts 154–19 and 20. Within this area, there are farm properties that are more complete in reflecting agricultural ways of life.

A determination of eligibility was completed for tracts 154–19 and 20 in June 1993 (NPS 1993). The National Park Service and the state historic preservation officer concurred that the property is ineligible for listing on the National Register of Historic Places (appendix E).

Surveys to determine the presence of asbestos-containing materials and lead-based paint would be required. Regulations for removing asbestos-containing materials and lead-based paint would be followed if these substances are found. Any future use of this area would be considered part of the *Canyon Rim/Burnwood Development Concept Plan*.

AFFECTED ENVIRONMENT

HISTORICAL BACKGROUND

Within the New River region, prehistoric occupation existed for approximately 15,000 years between 13,000 B.C. and A.D. 1800 (the Paleo-Indian through Historic periods). The first documented nonaboriginal settlement in New River Gorge was in Fayette County in 1789 at what is now the town of Sewell. In Fayette County, the first settlers were probably a group of squatters who lived near the present-day town of Ansted. By 1825, the town of Fayetteville (also in Fayette County) was established and the area at the bottom of the gorge began to flourish.

As their predecessors did, early Teays area residents struggled with the rugged topography of the area as they tried to bring in new industries as well as meet their living and transportation needs. As towns thrived and residents' needs increased, different transportation routes became an integral part of the gorge.

Although coal was the largest of Fayette County's industries, the timber industry produced an extensive quantity of lumber. Barges of sawed lumber were shipped down the river before the Chesapeake & Ohio Railroad was completed in 1873. The most harvested lumber species were oak, poplar, chestnut, basswood, hemlock, beech, and hickory. Lumber camps, which were disassembled when an area was cleared, were established throughout the woods. The forest of the New River Gorge and surrounding plateau areas were extensively cut during the height of the lumber industry. Thus, the current heavily wooded region consists entirely of second-growth timber. (Few indications of the timber industry still exist, except for the logging trails in the woods.)

Although the timber industry was important during the early development of the gorge, in overall development coal mining defined the use of the area from the late 1880s to the 1950s. Formed under cool and moist conditions during the Paleozoic (Pennsylvanian) geologic era, New River's coal is a high-quality bituminous coal with low sulphur and low ash that burns relatively cleanly. This "smokeless" coal, for which the region became famous, was used for heating homes and as coke for steel production. Extraction of the plentiful coal was the impetus for the Chesapeake & Ohio Railroad to maneuver a line through the gorge. Eventually extending to Charleston, Huntington, and Cincinnati, the main line ran along the New River through Fayette County. Its completion by 1873 made the opening of the New River coalfield and its three seams (known as Sewell, Beckley, and Fire Creek) possible. By the 1900s coal became an extremely profitable industry.

As the area developed and more towns were established, vehicular access became important. By the late 1880s, a road (Route 82) wound its way down the sides of the gorge to Fayette Station and crossed the New River on a steel truss bridge. This structure, now referred to as the Fayette Station bridge, was completed in 1889 to connect Route 82 and the towns and roads of Fayette, providing pedestrian, horse, and wagon access. Fayette was founded by Fayette Coal and Coke Company, early in the development of New River's coal industry. South Fayette (Fayette Station), a depot, and freight center for the eastbound Chesapeake & Ohio Railroad line, was across the river. State Route 82 became the only vehicular access to the river in this area, and the bridge became the only automobile and pedestrian crossing of the gorge between Cotton Hill and Thurmond.

In the early 20th century this area grew steadily due to the coal industry. During the second half of the century, however, the once flourishing towns declined with the depletion of coal resources. During the zenith of the area's coal production, from about 1900 to the late 1940s, 17 major companies extracted coal. However, over-mining and changes in coal extraction methods began to occur in the 1950s, requiring less physical labor but resulting in increased exploitation of the coal resource. By 1968 new forms of energy had lessened the nation's dependency on coal. Fayette County production dropped significantly from what it had been during peak years. Surface and auger mining and the mining of exhausted areas required fewer workers than traditional shaft extraction. In 1968 only 11 large mines remained, each employing at least 15 men. However, the smaller mines, which each employed less than 15 men, totaled 24. The total labor was only one-sixth of the work force used during the most productive years.

With the steady decline of the mining industry in the New River area, employment dwindled. Individuals born in the area, who traditionally would have entered the coal business, began to move to larger and more prosperous towns and cities. The once-thriving mining towns in the area were abandoned. All that remains today are the skeletons of these once successful communities. Although there is still active mining in the New River area, the heyday of coal production belongs to the past.

EXISTING USE AND DEVELOPMENT

Small communities are scattered throughout the gently sloping hills above the gorge outside the national river boundary. Remnants of old mining communities like Kaymoor have become destination points for those interested in hiking the trails in

the Teays area. Plans are also underway for the development of an environmental education center and NPS district offices at Burnwood.

Within the study area the main line of the CSX Railroad snakes its way along both sides of the New River. On the south side of the gorge, the CSX Railroad is parallel to and upslope from the state highway. The railroad crosses Wolf Creek on a trestle near Fayette Station. On the north side of the river, at the terminus of Route 82, there is an at-grade railroad crossing adjacent to a turnaround and parking area on state and private land.

State Route 82

Route 82 is a narrow one-lane/two-way mountain road under the jurisdiction of the state Department of Highways. Also known as Fayette Station road, it winds down the steep slopes of the gorge. The state right-of-way for this road is at least 30 feet wide. Hairpin turns make it difficult for buses and recreational vehicles to maneuver. All vehicles use the road shoulder or dirt pullouts when passing vehicles traveling in the opposite direction. Encroaching roadside vegetation can complicate this situation by limiting visibility and posing a safety hazard.

High peak use occurs between Memorial Day and Labor Day. During this period, Route 82 provides access for the large trucks and buses used by commercial rafting outfitters to transport equipment and customers to and from the river. People who boat and fish also use the road as access to Fayette Station, which is the only public take-out at this end of the gorge. Hikers and rock-climbers use the road to access the trails and hiking areas inside and outside the national river boundary.

Interpretive bus tours down the southwest side of the gorge to Fayette Station would continue to be provided by the existing concessioner. The tour bus service operates on weekends during peak months (May–September). Visitors, accompanied by a ranger interpreter, board the bus at the Canyon Rim visitor center. The system makes about 193 trips annually, carrying around 2,750 passengers (1992 figures). Each trip averages 14 passengers, with a bus capacity of 23 visitors.

The Riverfront Coal Company on the south side of the gorge has coal trucks traveling on Route 82 approximately every seven minutes. The presence of these large coal trucks on this one-lane/two-way winding road exacerbates traffic congestion, road deterioration, and safety problems, particularly during the summer peak visitor use periods.

New River Bridge Trailhead

Tracts 154–44 and 47 surround both sides of the south abutment of the U.S. 19 bridge. Both sides of the tract were used as staging areas for the construction of the bridge and have subsequently been allowed to revegetate naturally. There is no parking available at the area where the New River Bridge trailhead parking area is proposed — on Route 82 across from the whitewater rafting concessioner. Plans are underway to upgrade the trail between this area and Wolf Creek trailhead.

Wolf Creek Trailhead

Hikers use the Wolf Creek trailhead to access the Kaymoor community and mine remnants. Referred to as the Kaymoor trail, this is part of the larger Mary Draper Ingles trail system. A stepped footbridge (40 feet long) crosses Wolf Creek. When the trailhead parking area is full (three or

vehicles), cars park along the shoulders of Route 82 on both sides of the hairpin turn. This reduces the turning radius for buses and equipment trucks and creates unsafe road conditions.

Disintegrated remnants of a 1950s stream crossing are upstream, just beyond the current disturbed area and proposed development area.

Fayette Station Bridge

At the bottom of the gorge, Route 82 formerly crossed the New River at Fayette Station bridge. The state-owned bridge falls under the jurisdiction of the state highway department.

Until the completion of the U.S. 19 bridge in 1977, the Fayette Station bridge at the bottom of the gorge was the only vehicular river crossing between Thurmond and Cotton Hill. The 1889 steel truss bridge is considered to be an integral cultural and historic element of the area, although it has never formally been determined to be historically significant. Because of its design, historic function, and contribution to the visual setting and landscape of the area, it is considered to be a historic structure. The bridge reflects the historic context of the area, especially in contrast with the nearby U.S. 19 bridge. The Fayette Station bridge was closed to vehicular and pedestrian use in 1977 because of severe structural deterioration. Significant rehabilitation of the bridge and its piers would be required to make it again safe for vehicular and pedestrian use.

The town of Fayette on the east side of the bridge was established during the early years of coal production in New River Gorge. Although it was once a successful coal mining town, all that remains are remnants of the coke ovens and building foundations. Landowners at this site

include the National Park Service, the CSX Railroad, the state Department of Highways, and private interests. The area that would be affected by any actions to the Fayette Station bridge is not owned by the National Park Service.

Visitors and local residents continue to ignore posted warnings and climb through the access barriers to see the river, bungee jump, swing with ropes, watch boaters run the Fayette Station rapids, and use it as a vantage point to watch special events like Bridge Day.

Ajax Mine Pullout

Local residents use the water flow from the mine as their main source of year-round water. Traffic congestion occurs on Route 82 when local residents and campers try turning their vehicles around at this point or when vehicles line up on both sides of the road at the spring waiting their turn to access the water.

Delta Road 177 Parking Area

Within the NPS boundary, a segment of Delta Road 177 (about 600 feet) intersects Route 82 on the north side of the gorge. This narrow dirt road is closed at the NPS boundary and is used as a parking area by rock-climbers accessing the privately owned junkyard wall. Access to the one portion of the road is from Ames Heights, which is not currently owned by the National Park Service but is within the legislated boundary. The National Park Service has closed the road at the national river boundary because the road is not maintained and had been used by local residents as a trash dumping spot.

Rock-climbers and hikers have made the section of Delta Road 177 adjacent to Route 82 an informal parking lot. Parking

along this road is on a first-in/last-out basis, with as many as 20 vehicles parking in this area and along the road shoulder. When visitors can no longer park along Delta Road 177, they park along the hair-pin curve on Route 82. This restricts the turning radius and does not leave enough room for buses and equipment trucks to make the turn without reversing their vehicles — resulting in delays and dangerous traffic conditions.

Bridge Buttress Parking Area

Rock-climbers use the five road shoulder pullouts along Route 82 as parking areas to access the bridge buttress wall. As many as 31 cars park along these shoulder pullouts, with some rock-climbers using them for overnight camping.

Fern Creek Falls Trailhead

As part of the *Draft Trail Plan*, the parking area at Fern Creek will become the trailhead for the Fern Creek Falls trail. This parking area is used as an access point for the rock-climbers trail — an informal, non-NPS trail that crosses private land and leads to the Endless Wall. When the Fern Creek parking area is full (about 14 vehicles), hikers and rock-climbers park along Route 82, (a one-lane/two-way road) causing congestion and passing problems for vehicles traveling in the other direction. Complaints about the parking congestion and safety issues are frequent during summer peak use times. Furthermore, due to the recreational use of Fern Creek and the unauthorized use of this parking lot as an overnight campground, the area surrounding the parking lot has become a sanitary hazard because many users prefer not to use the chemical toilet.

Prior to the existence of the parking area, this site was used as a trash dump by local

residents and has not been completely cleared of waste material. As a precaution, a level I hazardous material survey was recently completed. This survey, based on guidelines contained in the U.S. Department of the Interior *Departmental Manual*, was a visual inspection that certified the absence of contaminants and the effects of any prior contamination.

Tracts 154-19 and 20

The 31 acres of the open fields on tract 154-20 are being used for special use events involving large- and small-scale group camping and as a base camp for the Student Conservation Association work program. Remnants of an orchard still exist. All of the fields are mowed annually. The house on tract 154-19 (total of 13 acres) is used for temporary office space, a storage area, and as an operations center for the Gauley River National Recreation Area law enforcement rangers. The road to the house also provides access to the privately owned and maintained cemetery (tract 154-25) on the site.

VISUAL RESOURCES

Route 82 provides visitors with one of only a few public access points to the steep and rocky slopes of the gorge within New River Gorge National River. The narrow road, lush forest, cascading streams, river access, and trails to historic communities like Kaymoor provide a wide range of opportunities for visitors to enjoy the outstanding visual and recreational resources in the gorge.

The steep canyon slopes are covered with a variety of deciduous trees and occasional clusters of conifers. The slopes and abundant rock outcrops and boulders create the conditions for dramatic tumbling waterfalls after rainstorms when small streams

cascade down the hollows to New River below. The narrow river corridor drops significantly in elevation over a short distance in the study area, creating the rapids used by the rafters. The natural features are also punctuated by an occasional mine, spoil bank, or remnant mine structure.

Recreational opportunities vary with the seasons. The rugged character of the New River is not easily seen during the late spring, summer, and early fall months because of verdant deciduous growth on the slopes. During the winter, views of the New River and the steep canyon walls completely change their character. This is when it is easiest to see the effects that roads, buildings, and mining activities have had on the gorge.

The greatest threats to the visual quality of the Teays area occur during the summer as demand for river access increases. Because of the steep topography, there are few access points, and use areas are severely limited in size. Most of these areas are near the river where users compete for the scarce parking.

Fayette Station bridge, although closed, provides an important visual and cultural link to the past. This bridge is one of the few points where visitors in the gorge can see the U.S. 19 bridge, the gorge, the river, and its rapids. The bridge stands as an important reminder of the critical role that such structures played in the life and development of communities along the gorge.

SOCIOECONOMIC ENVIRONMENT

The primary users of the study area are whitewater rafters, people who fish, rock-climbers, hikers, and sightseers. Although all of these affect the local economy in terms of the purchase of supplies, food,

fuel, accommodations, etc., only the rafting companies, tour buses, adjacent tourist businesses, and local campgrounds receive direct economic benefits from activities taking place within the study area.

At least 19 whitewater rafting companies use Fayette Station as one of the primary take-out points along the river. Maximum limits for river use are determined by the West Virginia Department of Natural Resources and are currently set at 3,875 users per day.

TABLE 2. VISITOR TAKE-OUT DATA FROM FAYETTE STATION

1983	63,368
1984	70,551
1985	79,646
1986	66,003
1987	66,588
1988	(not available)
1989	76,457
1990	85,173
1991	(not available)

Source: Fayette County Chamber of Commerce

A concessioner-operated bus service has been providing sightseeing tours from the Canyon Rim visitor center down the southwest side of the gorge. From May through September 1992, there were 193 bus tours that accommodated 2,759 visitors.

The National Park Service does not have any designated campgrounds in this area, preferring to rely on the private sector to address these needs. At least eight public campgrounds operate in the immediate vicinity and are used primarily from April through October.

Two special events held within the national river directly benefit the surrounding communities and region. Bridge Day brings in tens of thousands of people from around the country to watch

parachuters leap from the U.S. 19 bridge into the gorge. Whitewater Wednesday, a promotional event established by the Fayette Chamber of Commerce and the rafting companies, attracts an estimated 700 visitors to the area. Any development that would increase visitor access and use within the study area would have associated economic benefits to the local communities.

CULTURAL RESOURCES

Within the Teays study area, there are few cultural resources that would be impacted under any of the alternatives. Four of the nine development sites — Ajax mine pullout, Wolf Creek trailhead, and the Delta Road 177 and bridge buttress parking areas — do not contain any cultural resources that would be affected by actions under any of the alternatives. The cultural resources within the study area that may be affected by development are along Route 82 and archeological resources of Fayette at the Fayette Station bridge, tracts 154-19 and 20, and the Fern Creek Falls and New River Bridge trailheads.

State Route 82

Route 82 may be a historic resource, depending on its historical significance in the early development of the gorge and the old towns of Fayette and South Fayette. By the 1880s the road wound its way down the gorge and crossed the New River via the Fayette Station bridge. Route 82 was paved by 1928.

New River Bridge Trailhead

As at Fern Creek Falls trailhead, a preliminary archeological investigation was completed in 1992 for New River Bridge trailhead.

Fayette Station Bridge

The state-owned Fayette Station bridge was constructed in 1889 by the American Bridge Company, later reorganized as the Virginia Bridge and Iron Company of Roanoke, Virginia. This 279-foot span was formerly the only vehicular crossing of the gorge between Cotton Hill and Thurmond. The Pennsylvania (Petit) steel trussed design makes the Fayette Station bridge a unique resource within West Virginia. Because of unsafe conditions, this bridge was condemned to vehicular and pedestrian traffic when the U.S. 19 bridge was completed in 1977. The U.S. 19 bridge, the world's largest, single-arch, steel span bridge, was also constructed by the Virginia Bridge and Iron Company. The Fayette Station bridge has not officially been listed on the National Register of Historic Places. Before any actions involving this resource are undertaken, it is recommended that an evaluation of its historical significance be completed by the state.

The small town of Fayette, on the east side of the bridge, was established by the Fayette Coal and Coke Company early in the development of the coal mining industry in New River Gorge. A 1916 Chesapeake and Ohio Railroad map locates coke ovens, an engine house, and a tippie within the town. Fayette, established close to the rail line for easier mining of the Sewell coal seam, was connected to the town of South Fayette by the Fayette Station bridge.

South Fayette, a freight and depot center on the railroad main line, provided auxiliary needs to Fayette. By the 1920s Fayette was operated by the E.G. Blume Company, which in 1923 produced 8,850 tons of coal (Marshall 1981). All that currently remains of the town of Fayette are coke oven ruins and the foundations of assorted company and town buildings near the bridge.

Because the remaining town of Fayette is not owned exclusively by the National Park Service, the significance of the site would need to be evaluated in coordination with the state historic preservation office. The foundation of the Blume Company store is adjacent to the bridge.

Fern Creek Falls Trailhead

A preliminary archeological investigation for Fern Creek Falls, completed in August 1992, indicated the potential for various archeological resources.

Tracts 154–19 and 20

These tracts, originally part of the 122-acre Thomas farm settled in the 1860s, consist of 44 acres with a house, open fields, and remnants of an orchard. According to family members and courthouse records, the Thomas farm passed on from one generation to the next. William Thomas and his wife Mary, a local schoolteacher, were the second generation to farm the land. Their son, Ulysses Thomas, inherited the property in 1929. He managed the farm with the eldest of his three children, Robert, and together they harvested and sold produce to local coal company stores and area residents (oral interview with Ruth Hunt Creger, conducted by Loretta Schmidt, Historian, New River Gorge National River, 1992). In 1953 the farm was later divided among all the children, some of whom continued to live on the property. Robert Thomas lived in the original 1860s house with its adjacent pond, both of which are privately owned and outside the legislated boundary of the national river.

Lenila Thomas and her husband, James Laing, settled in a house constructed on what is currently referred to as the Laing tract (154–19). Constructed with materials from other buildings in the area, this

house was probably built in 1942-43. [Various sources differ on the date. A 1939 Fayette County highway map shows a structure on this location. However, J. Thomas Laing, son of Lenila and James Laing, maintains that the house was constructed for his parents in 1942-1943 (telephone interview with J. Thomas Laing, conducted by John Reed, New River Gorge National River, Land Resources Office, Glen Jean, WV, 1992). Deed records at the Fayette County Courthouse confirm the construction date as 1942.) This house is within the national river boundary.

A privately owned cemetery, which dates to 1890, is a separate tract (154-25) within the boundary of tract 154-19. Members of the founding Thomas family are buried there. Tracts 154-19 and 20, exclusive of the cemetery, were sold to the National Park Service in 1988 by Lenila Laing. This property no longer retains the integrity of the original farm. The setting has been altered by the placement of U.S. 19 and outbuildings and components of the farm no longer exist in these tracts.

A determination of eligibility was completed for tracts 154-19 and 20 and the Laing house by the National Park Service (NPS 1993). The state historic preservation officer concurred with the Park Service that the Laing house is ineligible for listing on the National Register of Historic Places (see appendix E). In August 1992 a preliminary archeological investigation indicated the potential for subsurface resources. Although the Laing property was found to be ineligible, a formal survey would be required to document any other potential sites not related to the Laing/Thomas occupancy before any action is undertaken on this property.

NATURAL RESOURCES

The humid, continental climate of the area is characterized by sharp temperature contrasts. Daytime temperatures range from lows in the 20s (F) in January to highs in the 90s (F) in July. About 45 inches of precipitation is evenly distributed throughout the year. There is more precipitation on the ridges than in the lower areas. Total snowfall is about 30 inches. Winter climate is relatively mild.

The New River Gorge National River is classified under the Clean Air Act of 1977 as a class 2 area, meaning that only specified levels of increase in particulate matter and sulfur dioxide concentrations are allowed. In addition, national and state primary and secondary standards are applicable for certain pollutants. The West Virginia Air Pollution Control Commission is responsible for enforcing these standards through its federally approved state implementation plan for maintaining air quality.

Air quality monitoring stations near New River Gorge measure minute particles of dust, smoke, ash, liquids, other substances suspended in air, and sulfur dioxide emissions from vehicles. Monitored levels of these pollutants are within the standards set for these constituents.

Air quality over the New River Gorge National River is probably better than at the above monitoring sites, which are closer to vehicular traffic and industry. Pollutant levels within the gorge are probably well within the standards, and air quality in the area can be characterized as good.

Geology

The New River flows northwest from its source in the Blue Ridge Mountains in North Carolina through a scenic gorge cut

into the Allegheny Plateau on the west slope of the Appalachian Mountains. The New River is thought to be a remnant of the ancient Teays River, which appeared as the Appalachians were first uplifted at the close of the Paleozoic era and continued its down-cutting action through the second Appalachian uplift at the end of the Mesozoic era. Geologists consider the New River to be the headwaters of the ancient Teays River and the oldest river system in North America.

In the study area, the Pocahontas and overlying New River formations are exposed. Both formations are nonmarine, coal-bearing sequences of sandstone interbedded with siltstone, shale, and underclay of an early Pennsylvanian age (320-330 million years old). The New River formation contains the Sewell coal beds, the source of the Kaymoor coal. The cliff-forming Nuttall sandstone of the New River formation caps the rim of the gorge in the study area, forming a scenic sandstone wall (the Endless Wall) that is popular with rock-climbers.

The Sewell coal seam contains premium grade coking coal. Large reserves are present in the study area along the Marr Branch. These reserves are currently being mined on private land inside the national river boundary along the west bank of Marr Branch.

There are no known economically valuable metallic or nonmetallic minerals, oil, or gas in the study area. Commercial quality sandstone, shale, sand and gravel, and clay are as abundant or more abundant outside the study area.

Topography/Soils

The width of the gorge in the study area varies between 0.5 and 0.8 mile wide at the rim and is 0.1 mile wide at the river. The

gorge drops steeply off the rim down to the river, with fairly constant slopes of about 40% grade or greater. The elevation is about 1,730 feet above sea level at Canyon Rim and about 845 feet at water level below the Fayette Station bridge.

On the northeast rim of the gorge adjacent to the study area, the Nuttall sandstone cliff, locally known as the Endless Wall, extends for several miles. The wall ranges from 80-100 feet high.

Soils in the study area are classified by the U.S. Department of Agriculture, Soil Conservation Service, as Dekalb-Gilpin — very stony soils of 40-70% slopes. Both Dekalb and Gilpin soils are channery, i.e., the soils contain thin flat pieces of sandstone. Dekalb soils are moderately deep and well drained, with a moderately coarse texture; they are formed in material weathered from acid sandstone. The soils have low to moderate moisture capacity and rapid permeability.

Gilpin soils are also moderately deep and well drained, with a medium textured surface and a finer textured subsoil than Dekalb soils. These soils formed in material weathered from acid siltstone, shale, and soft sandstone. The Gilpin soils of the study area have a very stony surface layer.

Steep rock land — Dekalb-Gilpin association — is the dominate soil type in the study area. This association consists of rough, broken sandstone cliffs and rock outcrop areas along with moderately deep, well-drained, moderately coarse textured and medium textured very steep soils on the upland areas.

Soil tests would be required before any construction. In general, very steep slopes (40-70%) in the study area place severe limitations on development. Other potential limitations on development include

the presence of bedrock 2-3 feet below the surface and the moderately slow permeability of the soils. Soils in the study area are moderately susceptible to erosion.

There are no soils in the study area that are prime or unique farmlands as defined by the U.S. Soil Conservation Service.

Water Resources/Water Quality

From approximately Sewell to Fayette the stream channel of the New River narrows and boulder size increases. Typical river cross sections in this reach show an average stream width of 350 feet, and the stream bottom is quite rough. There is essentially no floodplain because the stream banks are the valley walls. The stream gradient is about 4 feet per 1,000 feet of stream.

Within the study area, Marr Branch and Wolf Creek on the west bank and Fern Creek on the east bank flow into the New River. The confluence of Wolf Creek and the New River is near Fayette Station. Fern Creek empties into the New River approximately 0.75 mile upstream of the Fayette Station bridge, and the Marr Branch empties into the New River approximately 0.9 mile downstream of the bridge.

The greatest monthly flows are usually in March, and the lowest are in September or October. During low-flow periods, some of the smaller creeks in the area go dry.

Previous water quality monitoring by the West Virginia Department of Natural Resources has shown the overall water quality of the New River in the study area to be good. However, in 1991 water quality at Fayette Station exceeded the fecal coliform standard three times. Violations appear to correspond to high flows in the tributaries and high precipitation amounts. This represents a potential public health

risk for river users, especially at Wolf Creek, because this creek enters the New River just upriver of the large eddy above Fayette Station rapids.

Tributaries generally have had poorer overall water quality than the river, attesting to the dilution potential of the river. However, since pollution from these tributaries is not diluted immediately, there is the potential for detrimental impact on the aquatic biota of the New River downstream from these tributaries. Yet data on fish communities do not support a detrimental impact.

Wolf Creek has shown sporadic violations of the fecal coliform standard. This watershed has a lot of pastureland that may contribute to elevated fecal levels. In 1991 the standard was exceeded 50% of the time, possibly because of the overloaded lift station for the Fayetteville sewage treatment plant that is on the House Branch of Wolf Creek.

Other water monitoring parameters indicate that Wolf Creek has some acid mine drainage, but it either contributes little acid or its acid is assimilated by the time it reaches the mouth of the stream. The relatively high alkalinity found in Wolf Creek indicates that the mine drainage may even contribute alkaline substances instead of acidic materials.

In recent years the Marr Branch has exhibited some of the worst water quality of all gorge tributaries. In 1991 this creek exceeded the fecal coliform standard seven out of eight times tested. In 1990 the Marr Branch was the only tributary to violate the dissolved oxygen standard. The problem seems to lie with the Fayetteville sewage treatment plant. The plant functions up to standards, but the system brings in three times the design volume of the plant. The dissolved oxygen violation indicates that the organic load is so heavy

at times that its biological breakdown requires large amounts of dissolved oxygen.

Floodplains/Wetlands

A recent flood investigation study of the New River within the national river boundaries by the United States Geological Survey, in cooperation with the National Park Service, determined 100-year floodplain elevations. None of the alternatives presented in this plan proposes development within the 100-year floodplain of the New River.

Additionally, the U.S. Geological Survey delineated the 100-year floodplains of applicable areas of tributary watersheds (Wolf and Fern creeks and a tributary of Marr Branch at the New River Bridge trailhead) within the study area. Development, as presented in the alternatives, would not occur within the 100-year floodplain of any tributary watershed in the study area. The delineation of the floodplain for the Marr Branch tributary is only a rough estimate because the small drainage size leads to low statistical accuracy.

A national wetlands inventory map (from the U.S. Fish and Wildlife Service) for the study area shows no wetlands at the map's particular scale and accuracy. However, intermittent riverine and palustrine wetlands (all nontidal water dominated by trees, shrubs, and emergent vegetation) exist. These wetlands are commonly associated with riparian habitats. The Fish and Wildlife Service has classified the New River and its associated aquatic, wetland, and riparian habitats as resource category 1 — habitats of high value for evaluation species and unique and irreplaceable on a national basis or in the ecoregion. (Ecoregions are areas that show a commonality of various geographic characteristics, for example soil, land use, and potential natural vegetation.)

A wetland area at the New River Bridge trailhead was surveyed in August 1992 by state Department of Natural Resources personnel who determined that it was not a wetland and that development would not affect this area.

Vegetation

The New River functions as a migration corridor for plants because it is the only river flowing from southeast to northwest across the Appalachians. Hence, the flora is a combination of native and introduced species, coastal plain and prairie species, and high and low altitude species.

The forested slopes of the New River Gorge are covered with mixed hardwoods with oak (*Quercus* sp.), hickory (*Carya* sp.), tulip poplar (*Liriodendron tulipifera*), and black cherry (*Prunus serotina*) comprising most of the overstory. Little virgin timber remains in the gorge. Past logging operations harvested most of the slopes. Today, the second-growth forest has reclaimed its territory.

A 1987 biological survey of the New River Gorge National River identified six plant community associations within the study area: (1) sycamore/willow/birch/silver maple habitat; (2) rock riprap habitat; (3) boulder habitat; (4) tributary stream gorge habitat; (5) developed or disturbed habitat, and (6) ridgetop habitat. The sycamore/willow/birch/silver maple habitat is composed primarily of sycamore (*Platanus occidentalis*), black willow (*Salix nigra*), river birch (*Betula nigra*), silver maple (*Acer saccharinum*), and honey locust (*Gleditsia triacanthos*), although some variation occurs between sites. Typically this association is a dense stand of small diameter trees (<8 inches) that occur on sites of deposition, such as floodplains and islands. Understories vary depending on amount of

sunlight reaching the forest floor and frequency of flooding.

Rock riprap habitat is found on slopes greater than 30% and consists of upland hardwood species. Characteristic species include basswood (*Tilia americana*), red maple (*Acer rubrum*), Ohio buckeye (*Aesculus glabra*), and red oak (*Quercus rubra*). Large rocks limit understory growth.

Boulder habitat consists of large talus sandstone blocks that have fallen from the surrounding cliffs. Some riparian trees grow near the river's edge, with upland hardwoods slightly above. Characteristic species include river birch, sycamore, boxelder (*Acer negundo*), hickory, cucumber magnolia (*Magnolia acuminata*), and sweet gum (*Liquidambar styraciflua*).

Tributary stream gorge habitats, composed of hemlock (*Tsuga canadensis*), yellow birch (*Betula lutea*), red maple, and Ohio buckeye, are found bordering most tributary streams in the national river. The understories commonly include mountain laurel, rhododendrons, and ferns.

Developed or disturbed habitat refers to areas along the river where the natural riparian or upland vegetation has been replaced by homes, trailers, and industries and includes roadways, strip mines, and clear-cuts.

Characteristic vegetation associated with the ridgetop habitats includes American holly (*Ilex opaca*), big tooth aspen (*Populus grandidentata*), black birch (*Betula lenta*), post oak (*Quercus stellata*), and scrub oak (*Quercus ilicifolia*).

Wildlife

The New River and its tributaries comprise the largest and most significant warm-

water fishery in West Virginia. This fishery includes game fish populations of large-mouth bass (*Micropterus salmoides*), spotted bass (*Micropterus punctulatus*), smallmouth bass (*Micropterus dolomieu*), catfish (*Ictalurus* sp.), rock bass (*Ambloplites rupestris*), muskellunge (*Esox masquinongy*), walleye (*Stizostedion vitreum vitreum*), crappie (*Pomoxis* sp.), and sunfish (*Lepomis* sp.). The state Department of Natural Resources also stocks adult trout in six streams in New River Gorge National River. One of those streams is Wolf Creek. This stocking program will continue.

Common amphibian and reptile species include the spring peeper (*Hyla crucifer*), American toad (*Bufo americanus*), green frog (*Rana clamitans*), box turtle (*Terrapene carolina*), stinkpot turtle (*Sternotherus odoratus*), snapping turtle (*Chelydra serpentina*), copperhead (*Agkistrodon contortrix mokasen*), timber rattlesnake (*Crotalus horridus*), and various nonpoisonous snakes. There are also numerous salamander species in the area.

The New River is a migration corridor for birds, especially for songbirds; thus, some species are present in the study area only seasonally. Representative bird species that are in the study area throughout the year are ruffed grouse (*Bonasa umbellus*), wild turkey (*Meleagris gallopavo*), mourning dove (*Zenaidura macroura*), barred owl (*Strix varia*), red-bellied woodpecker (*Melanerpes carolinus*), downy woodpecker (*Picoides pubescens*), pileated woodpecker (*Dryocopus pileatus*), blue jay (*Cyanocitta cristata*), American crow (*Coryus brachyrhynchos*), Carolina chickadee (*Parus carolinensis*), tufted titmouse (*Parus bicolor*), white-breasted nuthatch (*Sitta carolinensis*), Carolina wren (*Thryothorus ludovicianus*), northern cardinal (*Cardinalis cardinalis*), song sparrow (*Melospiza melodia*), and American goldfinch (*Carduelis tristis*). An additional 51 species of birds are common

to the study area during at least two seasons.

Various raptor species are present. Turkey vultures (*Cathartes aura*) are commonly observed in riparian habitats, perched either in large dead trees or on large rocks. Turkey vultures appear to be more numerous in the northern section of the gorge, probably because of the presence of cliffs that are used for nesting. Ospreys (*Pandion haliaetus*) are often seen, but no nesting occurs; apparently, those observed are migrating from northern areas.

The most common mammal species are the opossum (*Didelphis marsupialis*), cottontail rabbit (*Sylvilagus floridanus*), deer mouse (*Peromyscus maniculatus*), eastern chipmunk (*Tamias striatus*), muskrat (*Ondatra zibethica*), fox and gray squirrels (*Sciurus niger* and *carolinensis*), raccoon (*Procyon lotor*), mink (*Mustela vison*), striped skunk (*Mephitis mephitis*), red fox (*Vulpes fulva*), and white-tailed deer (*Odocoileus virginianus*). Black bear (*Ursus americanus*) may occasionally use the study area, but it is not a commonly seen species.

Species of Special Concern

Although not officially listed by any agency as threatened or endangered, several plant and animal species may be present in the study area that require special consideration because of their rarity. Specific development sites in the study area would be surveyed for these sensitive species, and, if present, measures would be taken to protect them from any adverse impacts.

Responding to a request by the National Park Service, staff of the state's Natural Heritage Program reviewed their files for state rare plant and animal species locations in the study area (see appendix F). They believe that rare species should

not be a major factor under this plan; however, their records, at present, show that the following species of special concern are or may be present in the study area:

Plants

Hairy rockcress (*Arabis pycnocarpa*)
Meadow sundrops (*Oenothera pilosella*)
Tick-trefoil sp. (*Desmodium lineatum*)
Lespedeza hybrid (*Lespedeza X nuttallii*)
Spring coralroot (*Corallorhiza wisteriana*)

Animals

Blackbelly salamander (*Desmognathus quadramaculatus*)
Rock shrew (*Sorex dispar*)
Pygmy shrew (*Sorex hoyi winnemana*)
Diana butterfly (*Speyeria diana*)

All of the above plant species occur along Route 82 and/or Marr Branch south of the New River. Spring coralroot, tick-trefoil, and lespedeza grow in the same general location just south of the New River Bridge trailhead area. Hairy rockcress and meadow sundrops occur at separate locations north of the New River Bridge trailhead area. These latter species were found during rare plant surveys conducted by NPS staff.

The blackbelly salamander is known to inhabit the Wolf Creek and Kaymoor areas. Pollution and collection for fishing bait has reduced the numbers of this salamander within the New River watershed. The Wolf Creek population is near the northern limits of the species' range. The state has suggested that any development in the Wolf Creek area should protect the integrity of Wolf Creek and surrounding rocky banks.

The rock and pygmy shrews are currently listed as category 2 candidate species by the U.S. Fish and Wildlife Service. (A

category 2 candidate species is one for which there is information indicating that the species could possibly be threatened or endangered but for which substantial data on vulnerability or threat is lacking.) A recent upland vertebrate survey (Marshall University 1988) found the rock shrew just outside of the study area midway between Fayette Station and Kaymoor. The pygmy shrew was also found just outside the study area but near the Fern Creek Falls trailhead. The presence of these species within the study area and at specific development sites, especially at the Fern Creek Falls trailhead, is likely.

The Diana butterfly has been found within the study area adjacent to Fern Creek Falls trailhead but downstream some distance from the parking area. This species may also be present at the Fern Creek Falls trailhead.

Threatened and Endangered Species

Consultation under section 7 of the Endangered Species Act was conducted

with the U.S. Fish and Wildlife Service (see appendix F). The Fish and Wildlife Service and the state Natural Heritage Program believe that the only federally listed species likely to occur in the study area is the endangered peregrine falcon (*Falco peregrinus anatum*). In a cooperative effort between the National Park Service and the state Department of Natural Resources, peregrine falcons were released in the national river. A hacking (release) site was upriver of the Fern Creek Falls trailhead near the Endless Wall. The release program has been discontinued in the last few years because of frequent sightings of wild and returning peregrines to the gorge, although nesting has not been confirmed. NPS staff continue to monitor this site for peregrine falcon activity.

The state does not have threatened or endangered species legislation that gives listed species legally protected status. However, NPS policy does take into account any state species of special concern and treats such species as it would federally listed species.

ENVIRONMENTAL CONSEQUENCES

This section presents the environmental impacts of the alternatives. This discussion of impacts provides the scientific and analytic basis for comparison of the alternatives.

IMPACTS COMMON TO ALL ALTERNATIVES

Cultural Resources

Within the study area, there are few cultural resources that would be impacted under any of the alternatives. Some of these areas — Wolf Creek trailhead, Ajax mine pullout, and the Delta Road 177 and bridge buttress parking areas — do not contain any cultural resources that would be affected by actions under any of the alternatives. Cultural resources that would be impacted are described below under specific areas.

Route 82 will need to be evaluated by the state historic preservation officer to determine if the route is historically significant to the development and landscape of New River Gorge. If the route is determined to be significant, it will need to be treated as a historic resource.

Natural Resources

None of the alternatives would modify or encourage, directly or indirectly, permanent occupation in the floodplain of the New River or its tributaries. No new facilities would be in the 100-year floodplain of the New River or its tributaries. The footbridge at the Wolf Creek trailhead would be elevated above the 100-year floodplain. Also, no new impacts on wetlands would be anticipated.

Natural resource management consistent with NPS policies and guidelines would continue to guide management of the study area in response to visitor use impacts and natural change.

Encroaching roadside and parking area vegetation would continue to limit visibility and pose a safety hazard. Controlling the vegetation would probably increase the state Department of Highways' (and in some cases the national river's) operation and maintenance costs. Currently, the state uses herbicide spraying as the control method. Because this control method is not in accordance with NPS policies, the national river staff would continue to discuss mutually desirable control method(s) with the state.

No prime or unique farmland soils would be affected by any of the alternatives.

Visual Resources

None of the proposed changes under either alternative would impact the visual quality of the gorge's natural landscape.

Use and Development

Parking at the New River Bridge trailhead would provide an alternative access point for those hiking to Wolf Creek and Kaymoor. This trailhead could also relieve some of the vehicle overcrowding and congestion that occurs at Wolf Creek trailhead and on Route 82 by providing an alternate trail access point.

Socioeconomic Impacts

Construction activities might benefit local/regional contractors and their employees. Local businesses would benefit from the presence of these construction crews.

Some additional income might be associated with the introduction of signs at the Fern Creek Falls trailhead directing visitors to camping areas outside the national river boundary.

IMPACTS OF ALTERNATIVE A: NO ACTION

Impacts on Cultural Resources

Alternative A would have fewer impacts from development activities than alternative B.

State Route 82 — This route would remain a two-way, one-lane road and would not be impacted under this no-action alternative.

New River Bridge Trailhead — At the New River Bridge trailhead there are no aboveground cultural resources. An archeological survey completed before any ground-disturbing activities would identify archeological resources. If any resources are found, appropriate actions would be taken to mitigate any potential adverse effects. New development of parking areas would lead to increased use of the area, which might lead to secondary impacts on nearby sites.

Wolf Creek Trailhead — There are no cultural resources in this area that would be affected under this alternative.

Fayette Station Bridge (state owned) — The Fayette Station bridge would remain closed to vehicular and pedestrian traffic. The bridge would continue to disintegrate

through lack of maintenance or rehabilitative procedures, which would eventually result in permanent loss of this resource. The archeological resources of Fayette would not be affected under this alternative.

Ajax Mine Pullout — There are no cultural resources in the Ajax mine area that would be affected under this alternative.

Delta Road 177 Parking Area — There are no cultural resources at this site that would be affected.

Bridge Buttress Parking Area — There are no cultural resources at this site that would be affected.

Fern Creek Falls Trailhead — At Fern Creek Falls there are no aboveground cultural resources. An archeological survey before any ground-disturbing activities would identify any archeological sites. New development, such as the extended parking areas and vault toilets, could affect these sites as well as indirectly lead to impacts on nearby prehistoric sites because of increased visitor use. Appropriate action would be taken to mitigate potential adverse effects.

Tracts 154-19 and 20 — These tracts, which include a house and potential archeological resources, would not be affected under this alternative.

Impacts on Natural Resources

Alternative A would have fewer impacts on natural resources resulting from development activities than would alternative B. Alternative A would not create any significant loss of vegetative cover or wildlife habitat and would not significantly degrade air or water quality.

Maintaining the existing conditions of most development sites within the study area would allow natural successional changes. Vegetation would not be cleared and removed from sites except for maintenance and removal of trees that may cause safety hazards — with the exception of the New River Bridge and Fern Creek Falls trailheads, which are discussed below. Maintaining the existing conditions of most developed sites would create positive impacts by sustaining natural diversity and growth of existing vegetation. Soil quality would be maintained or improved with little or no erosional loss.

The topography, geological strata, and soils would continue to be impacted by road use and maintenance activities, resulting in soil compaction and erosion and landscape manipulation.

The presence of the road corridor and associated visitor use and maintenance activities would continue to disturb and displace wildlife.

At the New River Bridge trailhead, the graveled 16-vehicle parking area would require removal of about 0.2 acre of grassy area interspersed with thickets of shrubs and trees. However, this site was disturbed during construction of the U.S. 19 bridge; therefore, construction of this parking area would result in no new disturbance.

Construction of vault toilets at Fern Creek would require less than 0.1 acre of new land disturbance.

There would be no new impacts on threatened and endangered animal species and no effect on any threatened or endangered plant species. At Fern Creek, use of the parking area and access to Fern Creek Falls could disturb peregrine falcons, when present. NPS staff would continue to monitor this area and close access during peak or critical activity times, if necessary.

On tract 154–20 there would continue to be short-term adverse impacts on soils and grassland vegetation on the 31 acres used for day and overnight events. Continued annual mowing of tracts 154–19 and 20 (44 acres) by national river staff would promote colonization by opportunistic species, which inhibit the successional process.

Impacts on Visual Resources

Development under this alternative is minimal, so there would be few impacts on existing visual quality from development. Visual impacts resulting from parking at the New River Bridge trailhead would be minimal. The eventual collapse of the Fayette Station bridge would impact the visual integrity of this historic setting. Visual quality would be improved with the replacement of the chemical toilet with vault toilets at Fern Creek Falls trailhead.

Impacts on Use and Development

State Route 82 — The one-lane/two-way traffic on Route 82 would continue, as would the safety problems associated with the hairpin turns, turnarounds, pullouts, and coal hauling traffic. These problems would continue or worsen as demand for access to the gorge continues to grow, except at the Fayette railroad crossing with the proposed installation of traffic control devices.

New River Bridge Trailhead — There would be minimal impacts associated with the 16-car parking area because it would be on a recently disturbed area. The parking area would help reduce Kaymoor trail access congestion at Wolf Creek trailhead.

Wolf Creek Trailhead — Despite the addition of the New River Bridge

trailhead, traffic congestion in this area would likely continue. The hairpin curve would continue to be a difficult turning point for large vehicles.

Fayette Station Bridge (state owned) — The disintegrating bridge would continue to be a safety risk to any river users going under the bridge because small pieces of the wood decking continue to rot and fall from the bridge into the river. The eventual collapse poses obvious risks.

Continued unsanctioned use of the bridge as a viewing platform and recreational jumping point would probably continue unless additional actions were taken to prevent access onto the bridge. The eastern bridge abutment area (on privately owned tracts 153-05 and 06) would continue to be used as a parking area to access the bridge and river. Injuries from unsanctioned use of the bridge would likely continue.

Ajax Mine Pullout — Vehicles would continue to wait on and along the road to collect water from the spring, and road congestion problems in this area would persist.

Delta Road 177 Parking Area — Parking along Route 82 would continue to obstruct the road and cause problems for larger vehicles trying to maneuver the hairpin turn.

Bridge Buttress Parking Area — Undesignated parking and unauthorized camping along Route 82 would continue by rock-climbers accessing the bridge buttress climbing wall.

Fern Creek Falls Trailhead — Overflow parking along Route 82 would continue causing congestion along this road. The new vault toilets would improve sanitary conditions in this area. Signs directing rock-climbers to nearby camping areas

might reduce use of this trailhead as an unofficial campsite.

Tracts 154-19 and 20 — Continued current management would not create any new impacts.

Socioeconomic Impacts

There would be no new impacts.

Cumulative Impacts

The Fayette Station bridge, assumed to be historic, would continue to disintegrate, resulting in the decay and eventual loss of this resource. This loss, combined with the past loss of cultural resources, would cumulatively add to the impact on the cultural integrity of the national river.

IMPACTS OF ALTERNATIVE B: PREFERRED

Several of the actions described under alternative B would involve nonfederal property, especially those dealing with Route 82 and Fayette Station bridge, which are owned by the state. These actions are presented in this document as items for discussion with the state because it would be the state's responsibility to plan for, design, and implement these actions on its properties. It is inappropriate at this time to analyze specific impacts associated with these state actions because the necessary planning and design documents have not been done. However, for the purposes of evaluating the alternatives, this document does present some general impacts that could be associated with these future state actions.

Impacts on Cultural Resources

State Route 82 — Under this alternative, the proposed improvements of this state-owned route could impact the cultural setting and, if determined eligible for the National Register of Historic Places, could compromise the historical significance of the road. Proper documentation, harmonious design, and appropriate implementation of this design would mitigate these impacts.

New River Bridge Trailhead — There are no aboveground cultural resources at the New River Bridge trailhead site. An archeological survey (completed before any ground-disturbing activity) would identify any archeological resources. If any such resources are found, appropriate actions would be taken to mitigate any potential adverse effects on these resources. New development, such as installation of a comfort station and parking area, would lead to increased use of the area, which might lead to secondary impacts on nearby historic and prehistoric archeological sites.

Wolf Creek Trailhead — Removal and replacement of the existing Wolf Creek foot-bridge would not be an adverse impact because the existing bridge (built in the 1980s) is not considered to be historic. No previously undisturbed areas would be involved at this site.

Fayette Station Bridge (state owned and maintained) — Repair and stabilization of the bridge would be a positive impact because the structure is considered by the Park Service to be a historic structure. If repair/rehabilitation is not possible, replacement of the bridge would be an adverse affect because the potentially historic bridge would be removed. Replacement with a steel-trussed structure designed to be harmonious with the historic and visual setting would mitigate this adverse impact.

With respect to the disposition of the Fayette Station bridge, federal (Department of the Interior) funds would be used, which would constitute a direct federal action and require that the National Park Service be responsible for coordination and/or oversight of all compliance procedures. The National Park Service will also be responsible for the completion of all section 106 compliance documents as called for in the 1990 programmatic memorandum of agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers. The state Department of Highways will be responsible for developing the National Environmental Policy Act component of the environmental compliance document(s).

The archeological resources at Fayette might be affected, depending on the actions taken at the Fayette Station bridge. Under this alternative, it is recommended that the bridge be stabilized and rehabilitated in the same location for vehicular and pedestrian use. Although stabilization would be designed and executed with minimal impacts to the archeological resources of Fayette, there could be secondary effects on these resources. If this option of the alternative is not possible and the bridge is replaced at another location, some of the sites at Fayette might be directly affected. This process would require an assessment of options before a final decision. In any case, an archeological survey of Fayette would be required before any actions are undertaken.

Ajax Mine Pullout — No cultural resources are within or near the proposed pullout.

Delta Road 177 Parking Area — No cultural resources would be affected by upgrading the parking area and gating the road.

Bridge Buttress Parking Area — There are no cultural resources at this site that would be affected.

Fern Creek Falls Trailhead — There are no aboveground cultural resources at the Fern Creek Falls trailhead site. An archeological survey, done before any ground-disturbing activity, would identify any archeological resources; if such resources are found, appropriate action would be taken to mitigate any potential adverse effects on these resources. New development might lead to increased use of the area, which might lead to secondary impacts on nearby prehistoric archeological sites.

Tracts 154-19 and 20 — A determination of eligibility for the National Register of Historic Places was completed by the National Park Service in June 1993. The state historic preservation officer concurred that the Laing house is ineligible for listing on the National Register of Historic Places (appendix E and "Determination of Eligibility" [NPS 1993]). Thus compliance is complete, and the house's removal would not require any further consultation with the state historic preservation officer or the Advisory Council on Historic Preservation. However, a formal archeological survey would determine the significance of any potential archeological resources not related to the Thomas/Laing occupancy. If found, these resources would be protected through appropriate actions such as, if possible, avoiding development at sites. If disturbing the sites cannot be avoided, mitigation of impacts through excavation might be necessary.

Impacts on Natural Resources

Air Quality — There would be a minor, localized, and short-term decrease in air quality caused by dust, particulates, fumes, and noise produced by construction

equipment. This impact would be minor because disturbed areas at the development sites would be relatively small. Volatile hydrocarbons and other organic compounds in the asphalt would enter the air for a short time after completion of construction.

Use of a shuttle system would result in a long-term reduction in traffic congestion and thus air pollution in the gorge.

Improvements would likely lead to increased visitor use and thus increased motor vehicle emissions. Hauling trucks associated with new construction activity on Route 82 and roads outside the study area would also contribute to increased motor vehicle emissions. However, it is expected that state and federal air quality standards would not be exceeded.

Hazardous Materials — The survey for asbestos-containing materials and lead-based paint at the house on tract 154-19 would result in the determination of safe methods for disposal of such materials if they are found.

Geology/Topography/Soils — Widening Route 82, expanding turnouts, and creating parking areas would affect previously disturbed and undisturbed rock formations and soils within the state right-of-way and possibly on adjacent federal lands. Some formations and the soil profile within the limits of construction would be permanently destroyed; large cuts into the formations might be necessary in some places. Soils in the construction zones would be trampled and compacted by construction equipment and personnel. Rock material and soil might be redistributed, compacted, and covered with asphalt. Nonnative plants would have the opportunity to become established in the disturbed soil.

Slopes and soils adjacent to Route 82 would be disturbed. Quantities of rock and

soil might be removed from the road and redeposited in embankment fill.

Soils would be graded, with some cut-and-fill possible for improvement of the access to the Fern Creek and New River Bridge trailhead parking areas. Construction of parking areas would require grading and leveling and possibly fill. Borrow material sources and fill material disposal would be approved by NPS staff.

Erosion and subsequent runoff of disturbed soils would increase until natural and assisted revegetation occurred. Erosion, coupled with increased soil compaction, would lead to effects on vegetation, including potential root damage, tree loss, and exposure of bare ground.

Floodplains/Wetlands — At the New River Bridge trailhead site, removal of the required material across the intermittent creek (left from previous activities during Route 19 bridge construction) and installation of a culvert system under the proposed parking area would restore the natural drainage patterns and allow runoff to discharge into the unnamed tributary along the south side of the parking area.

Consultation with the state Public Lands Corporation and U.S. Army Corps of Engineers regarding sections 401 and 404 of the Clean Water Act would probably result in the need for permits for bridge work at Wolf Creek trailhead and Fayette Station bridge. Removal/repair of the bridges at these sites would result in minor disturbance to the floodplain and no impact to floodplain values.

Water Quality — The primary water quality concerns associated with road and parking area construction are erosion and increased sedimentation in streams. Minor, temporary decreases in water quality would be caused by runoff from bare soils into tributaries and the river. Such impacts

on water quality would generally be short term. Silt deposited in the streams/river would eventually be moved downstream by natural flushing action. No long-term impacts on water quality would be anticipated under this alternative.

Water turbidity could increase during road construction, particularly at stream crossings and culvert replacements. Long-term erosion would be reduced as a result of improved slopes and drainages. In areas where roads would be widened and where drainages are parallel and adjacent to the road, flows in floodplains could be adversely affected because the increased fill would reduce the drainage cross-sectional area. However, the amount of fill would be reduced through use of retaining walls.

Paving parking areas and increasing the width of Route 82 between the New River Bridge trailhead and the coal mine entry road would increase the amount of impervious surface in various drainage basins, thereby increasing the amount of storm runoff. However, compared to the size of the drainage basin, the amount of impervious road surface would be small, as would the increase in runoff.

The operation of heavy equipment in or adjacent to streams would increase the potential for toxic organic compounds to enter those streams. Accidental spills of diesel fuel, gasoline, hydraulic fluid, or other petroleum-based products could result in elevated but temporary concentrations of these substances for short distances downstream. Post-construction water quality changes would be small.

The comfort station at the New River Bridge trailhead would need water and sewer connections to the Fayetteville sewage treatment plant (above the site on Route 82). This treatment plant is already overburdened, and the Park Service would not connect until this plant has been

upgraded (scheduled for July 1994). These water and sewer connections would require the Park Service to seek right-of-way permission along Route 82 and any other lands that would be crossed by these lines.

All vault toilets/comfort stations would meet all sanitation standards and would be designed to safeguard water quality of the river and tributaries. Pump-out vault toilets at the Fern Creek Falls trailhead would eliminate the need for sewage treatment and would not pollute adjacent surface and groundwater.

State water quality standards would be met. The state Department of Natural Resources would be consulted, and that department's nonpoint source coordinator might be needed to determine whether a sediment and erosion control plan would be required.

Vegetation — Construction at most sites would result in minor habitat loss (secondary-growth, mixed-hardwood forest) and alteration of remaining habitat. Construction at the New River Bridge trailhead would result in minor loss of grassy areas and interspersed shrubs and mixed hardwood trees. Vegetation adjacent to Route 82 and existing parking areas would be disturbed and trees would be removed. Although vegetation removal and reduction in floral species diversity would occur, this alternative would not destroy or significantly alter the mixed deciduous forest ecosystem.

Revegetation of roadbanks and disturbed soil areas would be enhanced by conserving and using existing topsoil. There would be an increased potential for introduction of exotic plant species on, for example, road shoulders and roadbanks because of a lack of competition with native species in disturbed areas. Acreages for existing and new disturbance associated with Route 82 construction (except

where noted in table 3) and repair of the Fayette Station bridge cannot be estimated until preliminary designs exist.

On tract 154-20, approximately 31 acres of open fields currently being used for special events would be reclaimed by natural successional processes. This acreage combined with the 13 acres of tract 154-19 would allow 44 acres to continue vegetative succession (from grassland to woodland) because no annual mowing would occur.

Wildlife — Animals in construction areas, road corridors, and parking areas would be temporarily disturbed by equipment and personnel. Migration and use patterns would be expected to reestablish following development. Some mortality of resident individuals, such as rodents, could occur during construction, although this should not negatively affect populations.

There would be a minor, indirect effect on overall habitat capacity with a new loss of approximately 0.6 acre of forest vegetation and food source plants, but this effect would be negligible in terms of the larger amount of habitat available in the study area. The amount of forest vegetation that would be lost during Route 82 widening is not known, but it would presumably be negligible when compared to the amount of habitat available. Forage would be lost due to clearing for road and parking area construction; areas disturbed but unobstructed would eventually revegetate and be used by wildlife.

Some habitat for ground- and tree-dwelling small mammals and birds would be permanently eliminated, causing a decrease in size of the local wildlife population that would be proportional to the habitat lost. Following construction, reclaimed areas adjacent to Route 82 and the parking areas should eventually be reinhabited.

TABLE 3. COMPARISON OF DISTURBED ACREAGE, ALTERNATIVE B

Site	Disturbance (in acres)			
	Existing	+	New	= Total
New River Bridge Trailhead	1.16		0.24	1.40
Wolf Creek Trailhead	0.04		0.15 ^a	0.19
Ajax Mine Pullout	0.04		0.00 ^b	0.04
Delta Road 177 Parking Area	0.03		0.07	0.10
Bridge Buttress Parking Area	0.25		0.00 ^b	0.25
Fern Creek Falls Trailhead	0.13		0.13	0.26
Tracts 154-19 and 20	<u>44.00</u>		<u>0.00</u>	<u>44.00</u>
Totals ^c	45.7		0.6	46.3

^a Includes potential disturbance caused by widening Route 82 or expanding shoulder for shuttle stops; no change in disturbance for parking area.

^b Essentially no new disturbance; just addition of gravel (Ajax mine pullout) or paving (bridge buttress parking area) to formalize existing parking area.

^c Totals are rounded to nearest tenth of an acre.

Long-term impacts would include habitat fragmentation and increasing development on and human use of habitats — especially in previously undeveloped areas.

A new, wider roadway might have several effects on the vehicle-wildlife accident rate. Vehicle-wildlife accidents might initially decrease due to the improved visibility (wider roads and cleared slopes).

However, the vehicle-wildlife accident rate could increase after road improvement because of faster and increased traffic on the improved roads and wildlife attracted by the initial growth of grass and forbs on revegetated slopes in the road corridor. Eventually, the benefits of greater sight distance could be reduced by the encroachment of vegetation along the road corridor. The overall, long-term effect could be to increase the vehicle-wildlife accident rate.

Rare, Threatened, and Endangered Species — The proposed road construction

on Route 82 could affect existing populations or habitat of the five state-listed rare plant species. The state Department of Highways would need to survey for these and other species before construction. The proposed road and parking area construction at the Wolf Creek site would not affect the floodplain and therefore should not affect the blackbelly salamander.

With the new trail, more visitors would be attracted to the Fern Creek Falls trailhead site and, in turn, to the Endless Wall. There would be a potential for vandalism and increased disturbance and harassment of any peregrine falcons using the cliff area for roosting, hunting, or nesting. NPS staff would continue to monitor the area and implement a closure policy during peak or critical activity of peregrine falcons. No critical habitat would be lost.

Impacts on Visual Resources

Route 82 (state owned and maintained) — Widening Route 82, where possible, from the mine entry road to the New River Bridge trailhead would increase visibility along the corridor. Removal of the trees for widening would increase openings within the existing tree canopy. Although tree removal would alter short-range views, it would improve views into the gorge from along the road. Conversely, road construction would be visible from the other side of the gorge, particularly reworked cut-and-fill slopes and retaining walls.

New River Bridge Trailhead — The paved parking area at this trailhead would impact the vegetation at this previously disturbed site. The trailhead, comfort station, and shuttle parking would be on an uphill slope from Route 82 and would impact the view of those driving along the road.

Wolf Creek Trailhead — Widening the hairpin curve at Wolf Creek trailhead would require reworking some cut-and-fill slopes. This could involve the removal of some trees, which would temporarily open up more of the forest canopy.

The road alignment along Route 82 above Wolf Creek trailhead would be slightly altered so that parking would be on the cut slope shoulder and not along the fill slope shoulder. This would constitute minor change to existing conditions.

Fayette Station Bridge (state owned and maintained) — Repair/rehabilitation, if feasible, or properly designed replacement of the Fayette Station bridge would not significantly alter existing visual resources. Addition of a pedestrian walkway along the bridge would modify the historic appearance but would enhance pedestrian views of the gorge, river, and boaters going through the Fayette rapids.

Attaching existing utility lines to the bridge would leave the view of the gorge unobstructed.

Ajax Mine Pullout — Expanding the pullout would not compromise the visual qualities of this area.

Delta Road 177 Parking Area — Delineating the parking area, widening the hairpin curve, and prohibiting parking in the vicinity of the curve would reduce the random parking (visual disorder) associated with the first-in/last-out parking at the Route 82-Delta Road 177 intersection and eliminate traffic congestion.

Bridge Buttress Parking Area — Limiting shoulder parking to four designated parking areas would visually improve the area by reducing the cluttered appearance of randomly parked cars along the road shoulders.

Fern Creek Falls Trailhead — Expansion of the parking area at Fern Creek Falls trailhead might require the removal of some trees and undergrowth. The Park Service would work with the state Department of Highways to help resolve the visual impact of cars parking along Route 82. Replacing the chemical toilet with vault toilets would improve the visual quality of the area.

Tracts 154-19 and 20 — Revegetation, or fallowing, of these tracts would gradually change the character of the landscape from a pastoral setting to a wooded one. Removal of the house would also change the visual scene.

Impacts on Use and Development

Shuttle System — The shuttle system would reduce traffic on Route 82 and thus improve safety for travelers on that route. The shuttle would provide visitors with

easy access to river, bridge, visitor center, and various trailheads without having to deal with severe parking problems and road congestion.

Route 82 (state owned) — Route 82 would become a one-way road from the coal mine entry road on the south side of the gorge to the intersection with Route 85/3 on the north side of the gorge. This would significantly improve safety conditions by eliminating any oncoming traffic along the one-lane portion the road. Widening curves, installing guardrails, expanding pullouts, designating parking areas, and adding traffic control devices at the Fayette railroad crossing would also improve the unsafe road conditions.

Widening the road, where feasible, from the coal mine entry road to the New River Bridge trailhead would provide additional maneuvering space and turnouts for coal trucks and oncoming traffic, improving unsafe conditions along this portion of Route 82.

Improved road safety could decrease the number of vehicle accidents. However, improved road conditions could also encourage travelers to drive faster than posted speeds, possibly resulting in an increased accident rate.

Impacts on visitor experiences due to road improvements would not be all negative. Understanding the reasons for the inconvenience would ameliorate most negative experiences a visitor might have. Repeat visitors would become accustomed to the construction scenario and would also benefit from the improved road system.

New River Bridge Trailhead and Parking — Development of a phased parking area for vehicles and shuttles would provide alternatives to reduce traffic and parking congestion along Route 82.

Wolf Creek Trailhead — Delineation of the four parking spaces at the trailhead would reduce overflow parking problems along the hairpin curve. Designated parking for eight vehicles would be provided above the trail along the road shoulder and would also help alleviate overflow parking problems. A pullout for the shuttle would be provided below the curve. Widening the hairpin curve would improve site distance and the safety along this turn.

Designating at least one parking space for visitors with disabilities and replacing the stepped bridge with one that has no steps would provide easier trail access for visitors with disabilities.

Fayette Station Bridge (state owned and maintained) — Stabilization/rehabilitation, if feasible, of the Fayette Station bridge (or properly designed replacement) would permit pedestrian and vehicular access to both sides of the river and ensure safety for those on and under the bridge.

Ajax Mine Pullout — Expansion of the pullout area at Ajax mine would allow several vehicles to pull completely off the road, improving road safety conditions.

Delta Road 177 Parking Area — Developing a designated parking area for five vehicles would eliminate the problems of first-in/last-out parking. Eliminating the parking along the curve would make it easier for large vehicles to turn here, as would the proposed widening of the curve. Designating this as one of the shuttle stops would provide rock-climbers with an alternative means to access the area should the parking area be full.

Bridge Buttress Parking Area — Providing delineated parking in this area would eliminate the confusion about where to park along Route 82. Designating this as one of the shuttle stops would provide

rock-climbers with another way to access the bridge buttress wall should the parking areas be full. Connecting the shuttle pullout and parking areas with a gravel path would help keep people off Route 82 and direct them to the climbing area. Informational signs directing rock-climbers to nearby camping areas might reduce use of these parking areas as unauthorized campsites.

Fern Creek Falls Trailhead — Expanding the parking area would reduce overflow parking problems on Route 82. The new vault toilets would improve sanitary conditions in this area. Informational signs directing rock-climbers to nearby camping areas would reduce use of this trailhead as an unofficial campsite.

Tracts 154-19 and 20 — Relocating special uses, such as group camping, to privately owned public campgrounds or other areas in the national river would reduce visitor impacts in this area.

Socioeconomic Impacts

Shuttle System — The concession-operated shuttle system would provide some additional income within the region. Shuttle buses would be brought in, and drivers would be hired to operate the system.

Route 82 (state owned and maintained), Wolf Creek Trailhead, Ajax Mine Pullout, Delta Road 177 and Bridge Buttress Parking Areas, and Fern Creek Falls Trailhead — Improving the road conditions and developing parking areas would provide hundreds of thousands of dollars in contract work. This work might benefit the local and regional work force in addition to providing benefits to local businesses.

Road improvements would accommodate increased visitation to the area, which could mean additional revenue for local businesses.

New River Bridge Trailhead and Parking — Trailhead and shuttle parking would accommodate additional visitor use in this area, which could mean more visitors frequenting local and regional businesses.

Fayette Station Bridge (state owned and maintained) — The planning, design, and construction work associated with the repair (if feasible)/replacement of the bridge, as called for in congressional appropriations, is in excess of \$4 million. The economic benefits could be statewide. Bridge improvement would accommodate increased use of the area.

Tracts 154-19 and 20 — Demolition or sale (and removal) of the house could provide minor economic benefits to the area if local contractors are used to do the work.

Cumulative Impacts

Circulation, road safety standards, and driving comfort in the road corridor in the study area would be improved. These beneficial changes could result in more visitors and more traffic throughout the national river.

Because the existing transportation system and travel methods would be perpetuated, impacts associated with the original development of the roadway (such as habitat loss and fragmentation, and modification of wildlife use and movement) could be compounded. There are few, new impacts foreseen; however, vehicle-wildlife accidents could increase. The potential vehicle-wildlife accident rate would not be expected to affect the populations of most species, but it could result in the injury or death of some individuals.

When Route 82 and the parking areas at the Fern Creek, Wolf Creek, and New River Bridge trailheads and the Delta Road 177 and bridge buttress parking areas are in heavy use, minor decreases in air quality would be caused by auto emissions. Adverse impacts would be greatest during the high visitation season, but the effects on air quality from these sources should not be significant. The total amount of emissions cannot be determined at this time.

Runoff from new construction on Route 82 would have insignificant impacts on water quality in the Marr Branch. However, mitigation notwithstanding, minor cumulative impacts on water quality in the Marr Branch could occur.

Human presence in the gorge would decrease the habitat suitability for species intolerant of disturbance. Intolerant species would continue to avoid the sites when people are present.

Only approximately 0.6 acre of new disturbance would occur in the study area. However, 46.3 acres have been previously disturbed at development sites within the study area (see table 3). Development at Fayette Station and any unforeseen new disturbance in the study area would add to this cumulative impact.

Although efforts to restore disturbed lands would be implemented, where possible, an acre of reclaimed land would not equal the natural diversity or productivity of an acre of previously undisturbed land.

The cumulative impacts on cultural resources would be adverse under this alternative. If rehabilitation for the Fayette Station bridge is not possible, replacement would mean the loss of a (potentially) historic resource within the national river boundaries. Replacement of the bridge could also potentially affect the archeological sites of Fayette. If Route 82 is determined to be historically significant, the physical changes could impact potential historic components of the road. Furthermore, potential archeological sites on tracts 154-19 and 20 (other than Laing/Thomas-associated sites), Fayette, and at the New River Bridge and Fern Creek trailheads could be lost because of development. The loss of these resources would contribute to the cumulative degeneration of cultural resources within the national river.

Completion of the road improvements and parking areas would perpetuate the existing use patterns and the positive and negative impacts on natural, cultural, and socioeconomic resources. However, this alternative is not likely to contribute to any foreseeable significant cumulative impacts.

TABLE 4. SUMMARY OF IMPACTS ON CULTURAL RESOURCES*

	ALTERNATIVE A: NO ACTION	ALTERNATIVE B: PREFERRED
Public Transportation	N/A	N/A
State Route 82**	No new impacts.	Construction activities could be an adverse impact on Route 82 if the road is determined to be historically significant.
New River Bridge Trailhead	Possibility of disturbing archeological sites; archeological survey, completed prior to any construction, would result in protection of any resources found. Increased use might result in impacts on nearby sites.	Possibility of disturbing archeological sites; archeological survey, completed prior to any construction, would result in protection of any resources found. Increased use might result in impacts on nearby sites.
Wolf Creek Trailhead	No impacts.	No impacts.
Fayette Station Bridge**	Unabated disintegration of the bridge would lead to permanent loss of this resource. Archeological resources at Fayette would not be impacted.	Stabilization/rehabilitation of the bridge would be a positive impact. (Removal of bridge would be an adverse effect.) Depending on stabilization methods used, impacts on archeological sites at Fayette could be minimal to significant. If the bridge is replaced at a different location, archeological sites could potentially be adversely affected.
Ajax Mine Pullout	No impacts.	No impacts.
Delta Road 177 Parking Area**	No impacts.	No impacts.
Bridge Buttress Parking Area	No impacts.	No impacts.
Fern Creek Falls Trailhead	Possibility of disturbing archeological sites; archeological survey, completed before construction, would result in protection of any resources found. Increased use might result in impacts on nearby sites.	Possibility of disturbing archeological sites; archeological survey, completed before construction, would result in protection of any resources found. Increased use might result in impacts on nearby sites.
Tracts 154-19 and 20	No new impacts.	Demolition or sale (and removal) of Laing house requires no further compliance. Archeological survey to determine significance of potential archeological resources would be completed before removal and would result in protection of any resources found.

* See table 9 for cultural resources compliance requirements.

** Owned entirely by the state.

TABLE 5. SUMMARY OF IMPACTS ON NATURAL RESOURCES

	ALTERNATIVE A: NO ACTION	ALTERNATIVE B: PREFERRED
Public Transportation	No new impacts.	Positive long-term impact of reducing traffic congestion and air pollution.
State Route 82*	No new impacts.	Estimates of new disturbances, if any, are not possible until state develops preliminary designs. General impacts would be typical of most road construction projects (e.g., compacted soils, invasion by nonnative plants, habitat loss, erosion, water turbidity, and disturbance of wildlife); specific impacts must await preliminary designs. Road construction could affect existing populations or habitat of the five state rare plant species.
New River Bridge Trailhead	Construction of the parking area on previously disturbed land would not result in any new disturbance. Total size of parking area would be 0.2 acre.	Construction of parking area would result in a minor new disturbance of 0.24 acre. Total disturbance would be 1.4 acres, including 1.16 acres of previously disturbed land. The natural drainage pattern of the intermittent tributary stream would be restored.
Wolf Creek Trailhead	No new impacts.	Minor new disturbance of 0.15 acre associated with local widening of Route 82 — total disturbance 0.19 acre. Minor disturbance to floodplain. Possible need for permits to comply with sections 401 and 404 of Clean Water Act.
Fayette Station Bridge*	No new impacts.	Specific impact analysis pending preliminary design from state. Possible need for permits to comply with sections 401 and 404 of Clean Water Act. Minor disturbance to floodplain.
Ajax Mine Pullout	No new impacts.	No new impacts.
Delta Road 177 Parking Area*	No new impacts.	Construction would result in minor new disturbance of 0.07 acre; total disturbance of 0.1 acre.
Bridge Buttress Parking Area	No new impacts.	No new impacts.
Fern Creek Falls Trailhead	Construction of vault toilets would result in a minor new disturbance of less than 0.1 acre. Continued use of parking area and access to Fern Creek Falls could disturb peregrine falcons when they are present.	Construction of parking area would result in a minor new disturbance of 0.13 acre; total disturbance of 0.26 acre. Increased potential for impacts on peregrine falcons. Vault toilets would not pollute surface or groundwater.
Tracts 154-19 and 20	No new impacts. Continued short-term impacts on the 31 acres of soil and vegetation used for day and overnight events. Annual mowing of 44 acres to continue; vegetative community would continue to be grassland.	Annual mowing would stop. The previously disturbed 44 acres would then naturally proceed from grassland to woodland. Reclamation of land would offset any new disturbance in the study area. Asbestos and lead-based paint surveys prior to demolition of the house on tract 154-19 would result in safe removal procedures if such materials are found.

* Owned entirely by the state.

TABLE 6. SUMMARY OF IMPACTS ON VISUAL RESOURCES

	ALTERNATIVE A: NO ACTION	ALTERNATIVE B: PREFERRED
Public Transportation	No new impacts.	More shuttle buses would be visible on the road and at certain sites.
State Route 82*	No new impacts.	Increased visibility due to corridor widening. Tree removal would alter short-range views but improve views of gorge from the road. Road construction could be seen from other side of gorge.
New River Bridge Trailhead	Minimal impacts because of new parking area.	Travelers on Route 82 could see parked cars, comfort station, and shuttle activities.
Wolf Creek Trailhead	No new impacts.	Possible removal of trees would temporarily open forest canopy.
Fayette Station Bridge*	No new impacts. Eventual collapse of bridge would impact historic setting.	Rehabilitation of bridge (or properly designed replacement) would not alter visual resources. Addition of pedestrian walkway would modify historic appearance but enhance views.
Ajax Mine Pullout	No new impacts.	No new impacts.
Delta Road 177 Parking Area*	No new impacts.	Delineation of parking combined with widening of road curve would enhance visual character and eliminate traffic congestion.
Bridge Buttress Parking Area	No new impacts.	Delineation of four parking areas and shuttle pullout would enhance visual character.
Fern Creek Falls Trailhead	Visual quality would be improved by replacement of chemical toilets with vault toilets.	Removal of some trees to expand parking area would temporarily open canopy. Visual quality would be improved by replacement of chemical toilets with vault toilets.
Tracts 154-19 and 20	No new impacts.	Visual character of landscape would change over time from a pastoral setting to a wooded one. The visual nature of the property would change through removal of the house.

* Owned entirely by the state.

TABLE 7. SUMMARY OF IMPACTS ON USE AND DEVELOPMENT

	ALTERNATIVE A: NO ACTION	ALTERNATIVE B: PREFERRED
Public Transportation	No new impacts.	Shuttle system would reduce traffic on Route 82 and thus improve safety for travelers on that route. Shuttle would provide visitors with easy access to river, bridge, visitor center, and various trailheads without having to deal with severe parking problems and road congestion.
State Route 82*	No new impacts. Continuation of one-lane/two-way traffic and safety problems would continue and augment except at Fayette railroad crossing with the proposed installation of traffic control devices.	Improved safety conditions because of making road one way, widening portions of the road, widening some curves, providing guardrails and parking areas, and adding traffic control devices at the Fayette railroad crossing.
New River Bridge Trailhead	New graveled parking area (on previously disturbed land) developed for 16 vehicles would help reduce Kaymoor trail access congestion at Wolf Creek trailhead.	Development of phased 75-vehicle parking area would provide alternatives to reduce traffic congestion and parking on road shoulders.
Wolf Creek Trailhead	No new impacts. Continued traffic congestion (despite New River Bridge trailhead addition).	Designated parking and widening curves would reduce overflow parking and safety problems along Route 82 curve. Easier access for visitors with disabilities.
Fayette Station Bridge*	No new impacts. Bridge disintegration and unsanctioned use would continue to be a safety problem.	Rehabilitation/stabilization, if feasible, of bridge (or properly designed replacement) would permit pedestrian and vehicular access to both sides of bridge and ensure safety for those on and under bridge.
Ajax Mine Pullout	No new impacts. Continued traffic congestion.	Expansion of pullout area would improve safety conditions.
Delta Road 177 Parking Area*	No new impacts. Continued traffic congestion.	Designated parking would eliminate problems of first-in/last-out parking and safety concerns along the Route 82 curve. Shuttle stop would provide rock-climbers with another means to access the climbing area.
Bridge Buttress Parking Area	No new impacts.	Providing delineated parking would eliminate confusion about where to park along Route 82. Designation as a shuttle stop would provide rock-climbers with another way to access the area. Informational signs would reduce use of these parking areas as unauthorized campsites.
Fern Creek Falls Trailhead	Comfort station facility would improve sanitation. Continued traffic congestion. Possibly less use as unauthorized campsite.	Expansion of the parking area would reduce overflow parking problems along Route 82. New vault toilet would improve sanitary conditions. Possibly less use as unauthorized campsite.
Tracts 154-19 and 20	No new impacts.	Relocation of special events to privately owned public campgrounds or to other areas within the national river would allow fields to fallow and reduce visitor impacts.

* Owned entirely by the state.

TABLE 8. SUMMARY OF IMPACTS ON THE SOCIOECONOMIC ENVIRONMENT

	ALTERNATIVE A: NO ACTION	ALTERNATIVE B: PREFERRED
Public Transportation	No new impacts.	Shuttle system would provide some additional jobs and revenue in the region.
State Route 82* Wolf Creek Trailhead Ajax Mine Pullout Delta Road 177 Parking Area* Bridge Buttress Parking Area Fern Creek Falls Trailhead	No new impacts.	Construction activities associated with the improvement of road would provide regional/local economic benefit. Road improvements would accommodate increased use of the area and thus increase revenues.
New River Bridge Trailhead	No new impacts.	Trailhead and shuttle parking would allow more visitor use of this area, which could mean more visitors frequenting local and regional businesses.
Fayette Station Bridge*	No new impacts.	Construction activities associated with the repair of the bridge would provide state/regional/local economic benefit. Repair of the bridge would accommodate increased use of the area.
Tracts 154-19 and 20	No new impacts.	Removal of house could provide minor economic benefits if local contractors do the work.

* Owned entirely by the state.

COMPLIANCE

CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act

Within the Teays study area, potential impacts on each of the cultural resources owned by the National Park Service, as identified in the alternatives, will be evaluated. These must be addressed under the provisions for assessing effects outlined in 36 CFR part 800, issued by the Advisory Council on Historic Preservation implementing section 106 of the National Historic Preservation Act, as amended (NHPA; 16 USC 470 et seq.). Under the "Criteria of Effect" (36 CFR part 800.9[a]), federal undertakings are considered to have an effect when they alter the character, integrity, or use of a cultural resource.

Section 106 of the National Historic Preservation Act, as amended, applies only to federal or federally funded assisted properties. The Park Service will complete any necessary archeological and cultural resource surveys for sites with resources that will be affected under the alternatives. The National Park Service completed a determination of eligibility on tracts 154-19 (Laing house) and 20 in June 1993. The state historic preservation officer concurred with its ineligibility for listing on the National Register of Historic Places. No further consultation with the state historic preservation officer or the Advisory Council on Historic Preservation is required for removal of the house.

Regarding the state-owned Fayette Station bridge and Route 82, the Park Service's recommendation is that the state historic preservation officer complete historical research and evaluation for a determination of eligibility or a national register nomination for these resources. The related

planning and compliance documents should also be developed by the state. The Park Service would be a willing cooperator in development of these documents.

With respect to the disposition of the bridge, federal funds have been appropriated for use by the state Department of Highways. This direct federal action requires that state planning documents and actions comply with section 106, with the National Park Service responsible for the completion of the necessary assessment of effects forms.

The National Park Service will consult with the state historic preservation office and the Advisory Council on Historic Preservation to ensure that NPS operation and administration provide for the management of the sites' cultural resources in accordance with the intent of NPS policies and with section 106, as stated in the 1990 programmatic agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers. Under stipulation D of the agreement, all undertakings that are not considered programmatic exclusions or that are not included in plans reviewed under former programmatic memoranda of agreement will be reviewed in accordance with 36 CFR part 800.

Table 9 (at the end of this section) delineates actions that are either programmatic exclusions under the programmatic agreement between the National Conference of State Historic Preservation Officers, the Advisory Council on Historic Preservation, and the National Park Service, or are subject to further consultation with the state historic preservation office and the advisory council. Should the National Park Service

and the state historic preservation officer so decide, other actions not meeting the programmatic exclusion definition may be determined to need no further review under section 106 of the National Historic Preservation Act. Any such agreement, however, must be determined mutually and must be fully documented. Actions on state-owned properties that would require further review are also listed.

NATURAL RESOURCES

National Environmental Policy Act of 1969

This plan for the Teays area provides disclosure of the design, planning, and decision-making process and potential environmental consequences of the alternatives as required by the National Environmental Policy Act (NEPA). This document will be available for a 30-day public review period, after which the National Park Service would decide if the proposed action is significant enough to prepare an environmental impact statement. If an environmental impact statement is not required, the NPS regional director may sign a finding of no significant impacts. The finding of no significant impacts would conclude the NEPA compliance for this project and clear the way for funding and development.

Endangered Species Act of 1973

Section 7 of the Endangered Species Act directs all federal agencies to use their authorities to further the purpose of the act by carrying out programs for the conservation of endangered or threatened species. Federal agencies are required to consult with the U.S. Fish and Wildlife Service to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued

existence of listed species or critical habitat.

Informal consultation under section 7 of the Endangered Species Act was initiated with the Fish and Wildlife Service on July 13, 1992, with a request for information on listed species in the study area. The Fish and Wildlife Service responded that the only federally listed species likely to occur in the study area is the endangered peregrine falcon (*Falco peregrinus anatum*) (see "Affected Environment" section and appendix F for details).

On July 13, 1992, the National Park Service contacted the state Department of Commerce, Labor and Environmental Resources, Natural Heritage Program, concerning their listing of state endangered or threatened species, species of special concern, and critical habitat. The state responded that the hairy rockcress, meadow sundrops, tick-trefoil sp., lespedeza hybrid, spring coralroot, blackbelly salamander, rock shrew, pygmy shrew, and Diana butterfly are species of special concern that are or may be present in the study area (see "Affected Environment" section and appendix F for more details).

Clean Water Act of 1977

Proposed construction and NPS operations would have little effect on water quality. Federal and nonfederal construction would comply with the requirements of sections 401 and 404 of the Clean Water Act and other applicable federal, state, and local regulations. This project may require permits from the U.S. Army Corps of Engineers (404 permit) and the State Public Lands Corporation, the state agency that has jurisdiction over all stream bottoms. In addition, 401 certification (if necessary) would be obtained from the state. In conjunction with a possible 404 permit, the

plan may need a sediment and erosion control plan as administered by the state Division of Water Resources.

**Council on Environmental Quality
Memorandum on Prime or Unique
Farmland Soils**

A memorandum dated August 11, 1980, from the Council on Environmental Quality requires federal agencies to assess the effects of their actions on soils classified by the U.S. Soil Conservation Service (SCS) as prime or unique farmlands. The information contained in the various studies used for this report, including the SCS soil survey, indicate that

there are no such soils in the study area, so there would be no impact on prime or unique farmlands.

**Executive Orders 11988 ("Floodplain
Management") and 11990 ("Protection of
Wetlands")**

Executive Order 11988 requires all federal agencies to avoid construction within the 100-year floodplain unless no other practicable alternative exists. Executive Order 11990 requires federal agencies to avoid, where possible, impacts on wetlands. All alternatives in this plan avoid development within the 100-year floodplain and in wetland areas.

TABLE 9. DEVELOPMENT CONCEPT PLAN ACTION AND CULTURAL COMPLIANCE REQUIREMENTS

PROGRAMMATIC EXCLUSION

The following undertakings are covered by programmatic exclusions. These actions will require the submission of assessment of action forms (i.e., triple X forms) before implementation.

Conducting archeological investigations at Fayette, on tracts 154-19 and 20, and Fern Creek Falls and New River Bridge trailheads.	Programmatic exclusion (C1d)
Conducting health and safety activities such as removal of asbestos and lead-based paint at the house on tract 154-19.	Programmatic exclusion (C1j)
Installing signs and wayside exhibits.	Programmatic exclusion (C11)
Graveling existing dirt parking lot at Wolf Creek trailhead and, depending on NPS land acquisition, upgrade parking along Delta Road 177.	Programmatic exclusion (C1g)

NO FURTHER REVIEW

Demolishing/removing Laing house on tract 154-19.	No further review required.
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REQUIRES FURTHER REVIEW

The following undertakings will require additional consultation with the state historic preservation officer and possibly the Advisory Council on Historic Preservation.

Adding a parking lot at New River Bridge trailhead.	Requires further SHPO/ACHP review
Providing comfort and pumping stations at New River Bridge trailhead	Requires further SHPO/ACHP review
Expanding parking at Fern Creek Falls trailhead	Requires further SHPO/ACHP review
Constructing vault toilets to replace chemical toilets at Fern Creek Falls trailhead	Requires further SHPO/ACHP review
Replacing nonhistoric footbridge with barrier-free footbridge at Wolf Creek trailhead	Requires further SHPO/ACHP review

**TABLE 9. DEVELOPMENT CONCEPT PLAN ACTION AND CULTURAL COMPLIANCE
REQUIREMENTS (CONT.)**

ACTIONS ON STATE-OWNED PROPERTIES REQUIRING FURTHER REVIEW

The following undertakings will require additional consultation with the state historic preservation officer and possibly the Advisory Council on Historic Preservation.

Restoring Fayette Station bridge, if possible.
If not possible, removing and replacing bridge
might be required.

Requires further SHPO/ACHP review

APPENDIXES

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APPENDIX A: PREVIOUS DOCUMENTS

The *Statement for Management* (NPS 1981) for New River National Gorge initiated the planning process, described parameters within which planning at New River would take place, provided a general framework for directing operations, and communicated goals and management objectives to the public.

The *Statement for Management* was refined by the *General Management Plan* (NPS 1982), which provided an overview of resource management strategies, visitor use opportunities, and recommendations for facilities development throughout New River Gorge National River.

The *Management and Development Guidelines* (NPS 1988d) were written to update the 1982 management plan and to establish a philosophical framework for site-specific planning.

The *Interpretation Program Plan* (NPS 1989a) was prepared to guide development and implementation of the interpretive program throughout New River Gorge National River.

Collectively, these planning documents provide the purpose, management objectives, significance, issues, and interpretive themes for New River Gorge National River.

The *General Management Plan* identified Canyon Rim as the major point of visitor contact for information, orientation, and interpretation in this area. The NPS *Canyon Rim/Burnwood Development Concept Study/Environmental Assessment* was prepared and approved in 1988. Much of that plan, particularly at Canyon Rim, was implemented with the completion of the Canyon Rim visitor center in 1991. The development of an environmental education site at Burnwood, with nature trails, parking and walkways, and an activity/multipurpose building with restrooms and storage space for maintenance equipment, has not yet begun, although funding is being requested to design and construct these facilities.

Other documents that affect planning within the Teays planning area include the *River Management Plan: Draft* (NPS and New River Gorge Citizen's Task Force 1987), the *Kaymoor Development Concept Plan* (NPS 1992d), the *Draft Trail Plan* (NPS 1992a) and the *Fayette Station Parking and Comfort Station/Environmental Assessment: Review Draft* (NPS 1992b).

Recommendations from the above documents that pertain to the Teays planning area are summarized in the following chart.

TABLE A-1. PREVIOUS PLANNING RECOMMENDATIONS THAT APPLY TO THE TEAYS SITE

1982 GMP = General Management Plan

1987 RMP:D = River Management Plan: Draft

1992a DTP = Draft Trail Plan

TEAYS SITES	DEVELOPMENT GUIDELINES FROM PREVIOUS PLANNING DOCUMENTS
STATE ROUTE 82 (State owned and maintained)	• "The National Park Service will help the state maintain. . . West Virginia 82 to accommodate increasing use;" (1982 GMP, p. 2) • "Roads on the W.V. Dept. of Highways inventory will continue to be managed by that agency including. . . W.V. 82." (1982 GMP, p. 24) • "The NPS will work with WVDOH to install warning signs at the top of Fayette Station and South Fayette Roads. They should be installed to caution visitors about the presence of coal trucks and heavy bus use and of times when use is particularly hazardous." (1987 RMP:D, p. 22) • "West Virginia 82 leading from there [Canyon Rim] to the river will be improved and a turnaround and limited parking will be built at the bottom. The road will be open to vehicles year around, but a seasonal shuttle bus will be operated by a concessioner to reduce the congestion during the summer season." (1982 GMP, p.20)
TRACTS 154-44 THROUGH 47	• Acquire land. (1982 GMP, p. 33)
WOLF CREEK TRAILHEAD	• "There will be trailhead parking at Wolf Creek." (1982 GMP, p. 23) • "Replace footbridge over Wolf Creek." (1992a DTP, p. 85)
FAYETTE STATION BRIDGE (State owned)	• "... the bridge will be repaired for pedestrian use and visitors will picnic, fish or sightsee." (1982 GMP, p. 1) • "The West Virginia 82 bridge at the bottom will be improved for pedestrian use by visitors who wish to enjoy the excellent views of the high bridge and the tumbling river." (1982 GMP, pp. 22 & 23) • "The old Fayette Station Bridge should be preserved for its historic and recreational values." (1987 RMP:D, p. 28)
FAYETTE STATION	• "The NPS should support privately offered shuttle bus service for private users at. . . Fayette Station to ease traffic congestion on those roads. Private boaters however should be able to use their own vehicles to reach those areas. Signs should be erected at selected points to inform visitors of the shuttle bus system." (1987 RMP:D, pp. 24 & 25)
FERN CREEK	• Acquire land. (1982 GMP, p. 34)
TRACTS 153-05 AND 06	• Purchase on willing seller basis (1982 GMP, p. 33).

APPENDIX B: PLANNING DIRECTION

The **purposes** for New River Gorge National River, as determined in previous planning documents that apply to the study area, are as follows:

- Conserve and interpret outstanding natural, scenic, and historic values and objects in and around New River Gorge.
- Allow resource-based recreation that does not impair resource values.

The **significance** of the resources at New River Gorge are summarized by the following statements:

- Size and topographic relief make the gorge an outstanding scenic resource in West Virginia.
- New River Gorge provides some of the best extended season white-water boating in the eastern United States.
- New River is the top warm-water stream fishery in the state.
- New River is believed to be the oldest river on the North American continent, and it illustrates "rejuvenated stream" processes.
- The river corridor has resulted in unusual plant and animal diversity.
- New River Gorge contains remains of the mining and transportation of "smokeless" coal, which played a major role in America's industrial history.

The following **primary interpretive themes** were developed from the national river's purpose and significance, and in response to the national river's natural and cultural resources:

- The New River Gorge National River today represents a change in America's values and the perception of wildlands over the last 200 years — from that of wilderness as a barrier

to human progress to that of wildlands for inspiration and recreation.

- New River is unique because it was formed so much earlier than most of the rivers seen today, and, unlike most rivers, the New River has retained its course despite significant geological changes.
- The character of the New River and its gorge has resulted in a significant concentration of biological and cultural diversity that is well illustrated in the national river.
- New River Gorge exemplifies the rapid industrialization of America at the turn of the 20th century. This industrialization prompted major man-made changes in the gorge's ecosystem and in the appearance of the landscape.
- To successfully find, use, and enjoy park resources, visitors to the national river require special information.

The following **management objectives** have been formulated for New River Gorge National River based on the national river's purpose, significance and general visitor experiences:

- Protect and maintain the natural diversity of plants and animals.
- Sustain the warm-water fishery while protecting natural diversity.
- Preserve outstanding scenic views in and around the gorge — preserve the natural setting in the gorge from I-64 north, except at interpretive cultural sites and existing communities and conserve the rural pastoral scenery south of I-64.
- Encourage visitors to use related interpretive and recreation sites outside the national river boundary.
- Preserve coal mining, the railroad, and other historic resources that best illustrate the national river's significance.

- In cooperation with others, achieve and maintain water quality to meet state standards that allow for primary human contact.
- Develop a system of land- and water-based recreation opportunities that allow visitors to experience the national river's resources to the extent that natural, cultural, and scenic values are not impaired.
- The local towns and communities associated with New River are significant resources and integral to the visitor experience; therefore, the National Park Service will work with these communities to help perpetuate their character and vitality.
- Work with communities to the extent possible to help them maximize economic benefits related to park development without impairing key resources.

APPENDIX C: SCOPING/ISSUES

Meetings with New River staff throughout the project identified the following issues/concerns:

- State ownership and maintenance of Route 82 and Fayette Station bridge precludes any NPS action on state property. Discussions with the West Virginia Department of Highways would need to be initiated for any type of proposed change to these areas.
- Planning for privately owned lands within the legislated national river boundary and the study area would not be included in this development concept plan.
- Making Route 82 into two lanes through the gorge would severely damage the environment within the gorge and therefore should not be considered as an alternative.
- Any development proposal for tracts 154-19 and 20 needs to be done within the context of previous planning efforts for the Burnwood area.
- Planning and compliance for development at Fayette Station have been dealt with in the comprehensive design plan specific to this area.
- No development should occur at the New River Bridge/Southside overlook, and the area should be allowed to revegetate.
- No group camping should be considered other than that which is presently permitted on tracts 154-19 and 20.

In February 1992, the planning team for this *Development Concept Plan* and national river staff held the first public meeting to solicit comments regarding the scope of the project and the issues related to planning in the Teays area. The issues identified by the public at this meeting included:

- unsafe condition of Route 82 as a two-way/one-lane road
- traffic conflict with the coal hauling operation leaving the mine entry road on Route 82
- congested parking at Wolf Creek, Fern Creek, and Delta Road 177 parking area
- insufficient signing for unsafe road conditions on Route 82, tour information, etc.
- the need for a shuttle service for Fayette Station users because of traffic congestion at peak use times during the summer
- the repair/replacement of the Fayette Station bridge
- the need for parking/staging areas for rock-climbers accessing the Endless Wall
- the need for a group staging area for events like Bridge Day
- continued water access at the Ajax mine for local residents
- nondesignated camping along the road and river
- need for additional picnic areas
- illegal dumping of trash and waste in the river and in visitor use areas

In May 1992 the planning team and national river staff held a public meeting to solicit comments regarding the formulation of alternatives for the study area. The public comments included:

- Keep Route 82 in state ownership.
- Do not restrict public access on Route 82 in any way.
- Shuttle system use should be optional.
- The National Park Service should do everything possible to restore the bridge.
- The National Park Service should consider opening up Delta Road 177 to Ames Heights.

APPENDIX D: IMPLEMENTATION, STAFFING, MAINTENANCE, AND DEVELOPMENT COSTS

IMPLEMENTATION SCHEDULE

TABLE D-1. ALTERNATIVE A IMPLEMENTATION SCHEDULE

ACTION	INITIAL	FUTURE
Complete archeological studies	X	
Complete any needed assessment of effect forms, as appropriate	X	
Complete rare and endangered species surveys	X	
Complete floodplain delineation at Fern Creek Falls trailhead	X	
Discuss safety, maintenance, and construction issues with state highway department	X	
Design recommended actions/improvements		X
Construct comfort station at Fern Creek Falls trailhead		X
Build parking area at New River Bridge trailhead		X
Install bulletin cases and wayside exhibits		X

TABLE D-2. ALTERNATIVE B IMPLEMENTATION SCHEDULE

ACTION	INITIAL	FUTURE
Complete archeological studies	X	
Complete rare and endangered species surveys	X	
Complete hazardous materials survey for house on tract 154-19	X	
Complete floodplain delineation at New River Bridge, Wolf Creek, and Fern Creek Falls trailheads	X	
Discuss and establish with state highway department implementation schedule for proposed actions on state-owned land (Route 82, Wolf Creek trailhead, Fayette Station bridge, Ajax mine pullout, and the Delta Road 177 and the bridge buttress areas)	X	
Complete assessment of effects forms for appropriate actions		X
Obtain necessary permits		X
Coordinate the repair/rehab/replacement of Fayette Station bridge with the state		X
Negotiate with concessioner for shuttle service (assumes repair/replacement of Fayette Station bridge)		X
Design recommended actions/improvements		X
Install site utilities at New River Bridge trailhead		X
Construct comfort stations at New River Bridge and Fern Creek Falls trailheads		X
Build parking areas at the New River Bridge, Wolf Creek, and Fern Creek Falls trailheads		X
Remove current bridge and construct new bridge at Wolf Creek trailhead		X
Install bulletin cases and wayside exhibits (coordinate with state when appropriate)		X
Coordinate the construction of parking areas at the Delta Road 177 and bridge buttress parking areas with the state		X
Coordinate the provision of pullouts and guardrails and widening hairpin curves along Route 82, where needed, with state		X
Coordinate the installation of proposed shuttle pullouts at Fayette Station, the Wolf Creek and New River Bridge trailheads, the bridge buttress parking area, and Canyon Rim with the state		X
Coordinate the realignment of the road at Wolf Creek trailhead with state to provide parallel parking		X
Coordinate widening the road shoulder at Ajax mine pullout with the state		X

STAFFING REQUIREMENTS

Alternative A: No Action

Interpretation and Visitor Services — Minimal change from baseline requirements

Protection Division — Minimal change from baseline requirements

Alternative B: Preferred Alternative

FY 93 Costs

Interpretation and Visitor Services Division

GS-025-5 (270 days) — Two seasonal interpreters

	\$ 20,000	personnel
	3,000	equipment
	<u>1,500</u>	supplies and materials
TOTAL	\$ 24,500	

Protection Division

GS 5/7 - Permanent ranger

GS 5 (180 days) — One seasonal ranger

	\$ 57,000	personnel
	5,000	equipment
	<u>2,000</u>	supplies and materials
TOTAL	\$ 64,000	

MAINTENANCE COSTS

Maintenance costs for alternative A would have minimal changes from baseline requirements.

TABLE D-3. MAINTENANCE COSTS FOR ALTERNATIVE B

MAINTENANCE ITEM	TOTAL COST ESTIMATE
Comfort station maintenance and trash collection at the New River Bridge, Fern Creek Falls, and Wolf Creek trailheads, the Delta Road 177 and bridge buttress parking areas, and the Ajax mine pullout	
2 seasonals, WG-5	\$21,666
Supplies and materials	15,000
Parking lot maintenance at New River Bridge, Fern Creek Falls, and Wolf Creek trailheads, and the Delta Road 177 and bridge buttress parking areas	
Part-time engineering, equipment operator, part-time maintenance worker, and supplies and materials	44,000
Vehicle	<u>4,000</u>
	\$84,666

DEVELOPMENT COST ESTIMATES**TABLE D-4. DEVELOPMENT COSTS, ALTERNATIVE A, NO ACTION**

DEVELOPMENT ITEM AND QUANTITY	GROSS CONSTRUCTION COSTS	ADVANCE AND PROJECT PLANNING COSTS	TOTAL PROJECT COSTS
New River Bridge trailhead — 16-vehicle gravel parking	\$20,043	\$3,825	\$23,868
Fern Creek Falls trailhead vault toilets	85,150	16,250	101,400
Contingency for unknown site conditions	10,519	2,007	12,526
TOTAL COSTS	\$115,712	\$22,082	\$137,794

Note: The costs given here are class C estimates. A class C estimate is a conceptual cost estimate based on square-foot cost of similar construction. Estimates do not include any West Virginia Department of Highways costs for actions proposed on state property. These estimates are valid through October 1994

TABLE D-5. DEVELOPMENT COSTS, ALTERNATIVE B, PREFERRED

DEVELOPMENT ITEM AND QUANTITY	GROSS CONSTRUCTION COSTS	ADVANCE AND PROJECT PLANNING COSTS	TOTAL PROJECT COSTS
New River Bridge Trailhead			
• Clearing and grubbing	\$3,891	\$742	\$4,633
• Paved parking area, 75-vehicle/3-bus	185,889	35,475	221,364
• Comfort station with water and sewer connection	172,920	33,000	205,920
• Pedestrian walk	17,652	3,368	21,020
• Stone headwall	3,930	750	4,680
• Pumping station	58,950	11,250	70,200
• Earthwork	<u>72,050</u>	<u>13,750</u>	<u>85,800</u>
	\$515,282	\$98,335	\$613,617
Wolf Creek Trailhead			
• Four-vehicle gravel parking	\$6,681	\$1,275	\$7,956
• Bridge	50,435	9,525	60,060
• Demolish existing bridge	<u>982</u>	<u>157</u>	<u>1,139</u>
	\$58,098	\$11,057	\$69,155
Ajax Mine Pullout^a	\$4,676	\$892	\$5,568
Delta Road 177 Parking Area^a			
• Clearing and grubbing	\$1,297	\$247	\$1,544
• Five-vehicle gravel parking area	7,794	1,487	9,281
• Earthwork	<u>1,241</u>	<u>310</u>	<u>1,551</u>
	\$10,332	\$2,044	\$12,376
Bridge Buttress Parking Area^a			
• Paving the five pullout areas and trail construction	\$73,878	\$14,099	\$87,977
Fern Creek Falls Trailhead			
• 24-vehicle gravel parking area	\$28,951	\$5,525	\$34,476
• Vault toilets	<u>85,150</u>	<u>16,250</u>	<u>101,400</u>
	\$114,101	\$21,775	\$135,876
Tracts 154-19 and 20			
• Hazardous material survey	\$32,750	\$6,250	\$39,000
• Demolish house (estimate does not cover removal of hazardous material in house if found)	<u>10,480</u>	<u>2,000</u>	<u>12,480</u>
	\$43,230	\$8,250	\$51,480
Contingency for Unknown Site Conditions	\$74,104	\$14,146	\$88,250
TOTAL COSTS	\$893,701	\$170,598	\$1,064,299

Note: The costs given here are class C estimates. A class C estimate is a conceptual cost estimate based on square-foot cost of similar construction. Estimates do not include any West Virginia Department of Highways costs for actions proposed on state property. Estimates are valid through October 1994.

^a Estimates are for NPS construction only. Responsibilities for construction in these areas has yet to be determined pending delineation of the state right-of-way.

INTERPRETIVE PRODUCTION COSTS

Alternative A

The following costs represent Harpers Ferry Center gross figures.

Bulletin cases (2) — planning and production (New River Bridge and Fern Creek Falls trailheads)	\$20,000
Wayside exhibits (2) — planning and production (Both sides of Fayette Station bridge)	<u>\$12,000</u>
TOTAL	\$32,000

Alternative B

The following costs represent Harpers Ferry Center gross figures.

Bulletin cases (3) — planning and production (New River Bridge, Wolf Creek, and Fern Creek Falls trailheads)	\$30,000
Wayside exhibits (2) — planning and production (Both sides of Fayette Station bridge)	\$12,000
Bulletin cases for shuttle stops (2) — planning and production (New River Bridge trailhead, Canyon Rim visitor center)	\$20,000
Small bulletin cases for bridge buttress parking area (3) (Information on camping outside park boundary and on bridge buttress wall)	<u>\$18,000</u>
TOTAL	\$80,000

TABLE D-6. TOTAL COSTS

	Alternative A	Alternative B
Staffing		88,500
Maintenance		84,666
Development	\$137,794	1,064,299
Interpretation	32,000	80,000
TOTAL	\$169,794	\$1,317,465

APPENDIX E: LAING HOUSE CONCURRENCE



June 24, 1993

John J. Reynolds
Regional Director
Mid Atlantic Regional Office
National Park Service
143 S. Third Street
Philadelphia, PA 19106

ATTN: Katherine Stevenson

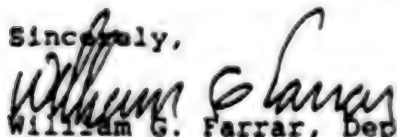
RE: Laing House
FR# 93-1042-FA

Dear Ms. Stevenson,

Enclosed is the signed concurrence regarding the Laing House. We concur that the building does not meet the Criteria of the National Register.

Thank you for your cooperation. If you have any questions, please contact Susan Pierce, Director of Review and Compliance.

Sincerely,


William G. Farrar, Deputy
State Historic Preservation Officer

WGF/SMP:ps

APPENDIX F: CONSULTATION REGARDING RARE, THREATENED, AND ENDANGERED SPECIES

JUL 26 1992



United States Department of the Interior

FISH AND WILDLIFE SERVICE
West Virginia Field Office
Post Office Box 1278
Elkins, West Virginia 26241



July 24, 1992

NERI
149 P.T. 03

Mr. Robert J. Shelley
Manager, Eastern Team
National Park Service
Denver Service Center
12795 W. Alameda Parkway
Post Office Box 25287
Denver, Colorado 80225-0287

Manager	<i>[Signature]</i>
Management Specialist	
Assistant Manager	<i>[Signature]</i>
DES	<i>[Signature]</i>
Permitting	<i>[Signature]</i>
Design	<i>[Signature]</i>
Construction	
Permitting & Review	
Permitting & Review	
EA	
CEA	
WPP	
WPP	

Dear Mr. Shelley:

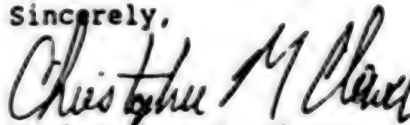
This responds to your letter of July 13, 1992, requesting information concerning the presence of federally listed or proposed endangered and threatened species within the New River Gorge National River in the vicinity of Fayette Station, Fayette County, West Virginia. The information will be used in preparing an environmental assessment for a development concept plan for Teays Landing, package 149.

Only one federally listed species under our jurisdiction is likely to occur in the study area, the endangered peregrine falcon, Falco peregrinus anatum. In a cooperative effort between the National Park Service and the West Virginia Division of Natural Resources, peregrines were released in the New River Gorge National River up river of the study area. The release program has been discontinued in the last few years because of the frequent sightings of wild and returning peregrines to the Gorge, although nesting has not been confirmed. Your environmental assessment should address the possible presence of peregrines in the area and the possible effects of the development concept plan to this listed species. A compilation of federally listed endangered and threatened species in West Virginia is enclosed for your information.

This letter provides technical assistance only and does not constitute the review comments of the Secretary of the Interior within the meaning of Section 2(b) of the Fish and Wildlife Coordination Act (P.L. 83-624); the National Environmental Policy Act of 1969 (42 U.S.C. 4231 et seq.); the Clean Water Act of 1977 (P.L. 95-217); the Endangered species Act of 1973, as amended (16 U.S.C. 1531 et seq.); or other pertinent legislation.

If you have any questions regarding this proposed project
please contact William Tolin at 304-636-6586

Sincerely,

A handwritten signature in cursive script, appearing to read "Christopher M. Clower".

Christopher M. Clower
Supervisor

Enclosure

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN WEST VIRGINIA

COMMON NAME	SCIENTIFIC NAME	STATUS	DISTRIBUTION
FISHES			
None			
BIRDS			
Eagle, bald	<u>Haliaeetus leucocephalus</u>	E *	Entire state Nest sites: Pendleton, Grant, and Hardy Cos.
Falcon, American peregrine	<u>Falco peregrinus anatum</u>	E	Entire state Migratory release sites in Pendleton and Payette Cos. Nest site: Pendleton Co.
Falcon, Arctic peregrine	<u>Falco peregrinus tundrius</u>	T **	Entire state Migratory, no nesting.
MAMMALS			
Bat, Indiana	<u>Myotis sodalis</u>	E	Entire state Known hibernacula in Tucker, Pocahontas, Preston, and Pendleton Cos. Critical habitat: Bellhole Cave, Pendleton Co.
Bat, Virginia big-eared	<u>Plecotus townsendii virginianus</u>	E	Primarily northeastern cos., especially Pendleton, Tucker, and Grant Cos. Critical habitat: Bellhole Cave, Cave Mountain Cave, Hoffman School Cave, and Simit Cave in Pendleton Co.; Cave Hollow Cave in Tucker Co.
Bat, gray	<u>Myotis grisescens</u>	E	Bellhole Cave, Pendleton Co.
Cougar, eastern	<u>Felis concolor cougar</u>	E	Entire state May be extinct.
Squirrel, Virginia northern flying	<u>Glaucomys sabrinus fuscus</u>	E	Pocahontas, Tucker, Pendleton, Greenbrier, Webster, and Randolph Cos., within proclamation boundary of Monongahela National Forest.
MOLLUSKS			
Snail, flat-spined three-toothed land	<u>Triodopsis platysaroides</u>	T	Monongalia and Preston Cos., mainly in Cooper's Rock State Forest area, both sides of Cheat River Gorge.
Mussel, tubercled - blossom pearly	<u>Epiclaema (=Dysnomia) torulosa torulosa</u>	E	Kanawha River, Fayette Co. May be extinct.

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN WEST VIRGINIA

COMMON NAME	SCIENTIFIC NAME	STATUS	DISTRIBUTION
<u>MOLLUSKS - Continued</u>			
Mussel, pink sacklet pearly	<u>Lampsilis abrupta</u> (=orbiculata)	E	Kanawha River, Fayette Co.; Ohio River, Cabell, Mason and Wood Cos.; Elk River, Kanawha Co.
Mussel, James spiny	<u>Pleurobema (Cantharis)</u> <u>collina</u>	E	Monroe Co., South Fork of Potts Creek.
Mussel, fanshell	<u>Cyprogenia stegaria</u> (=irrorata)	E	Kanawha River, Fayette Co.
Mussel, clubshell	<u>Pleurobema clava</u>	P	Elk River, Braxton and Clay Cos.
<u>PLANTS</u>			
Harperella	<u>Ptilimnium nodosum</u>	E	Morgan County.
Shale barren rock cress	<u>Arabis serotina</u>	E	Greenbrier, Hardy, and Pendleton Cos.
Running buffalo clover	<u>Trifolium stoloniferum</u>	E	Fayette, Webster, and Randolph Cos.
Virginia spiraea	<u>Spiraea virginiana</u>	T	Nicholas, Fayette, Mercer, Raleigh, and Greenbrier Cos.
Northeastern bulrush	<u>Scirpus ancistrochaetus</u>	E	Berkeley County.
<u>AMPHIBIANS</u>			
Chest Mountain salamander	<u>Plethodon nettingi</u>	T	Pendleton, Pocahontas, Randolph, and Tucker Cos.

* Endangered

** Threatened

*** Proposed



Received in Manager's Office

AUG 13 1992

STATE OF WEST VIRGINIA
DEPARTMENT OF COMMERCE, LABOR AND ENVIRONMENTAL RESOURCES
DIVISION OF NATURAL RESOURCES
OPERATIONS CENTER

P.O. Box 67

Elkins, West Virginia 26241

Telephone (304)637-0245 · Fax (304)637-0250

GASTON CAPERTON
Governor

J. EDWARD HAMRICK III
Director

ANN A. SPANER
Deputy Director

August 7, 1992

Park: NERI
Pkg. # 149 P.T. 03
Area P.G.
Subject Leap DCP

Mr. Robert J. Shelley
National Park Service
Denver Service Center
12795 West Alameda Parkway
P. O. Box 25287
Denver, CO 80225-0287

Manager	<i>Caperton</i>
Manager's Office	
Assistant	<i>Caperton</i>
Director	<i>Caperton</i>
Deputy Director	<i>Spaner</i>
Public Affairs	
Records	
Training	
Finance	
Legal	
Planning	
Research	
Administration	
Other	

Dear Mr. Shelley:

We have reviewed our maps for known rare species locations that are in the region of the New River Gorge bridge. The enclosed map shows the results of our preliminary review. None of the species noted are listed as threatened or endangered by the U.S. Fish and Wildlife Service. In addition to the records shown on the map and attached list, we are concerned about the peregrine falcon reintroductions in the vicinity of the endless wall. Any activities in this area will have to take the peregrines into account.

We do not have sufficient information to do an authoritative review of each potential project. On the surface it appears that rare species will not be a major factor in planning for any of the projects. Dr. Tom Pauley of Marshall University has been conducting additional studies in this region for the National Park Service over the last couple years. Please contact him to determine the latest information regarding upland vertebrates.

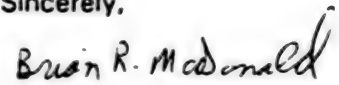
Any project that reaches a final planning phase should have a cursory field review conducted to determine if rare species habitat exists. Few people have a familiarity with all these areas which is primarily why a cursory review is a good idea.

If we were to assist in field reviews from our Elkins office, the costs for whatever number of sites that could be reviewed in one day would necessitate a two day trip, per diem and transportation expenses. Each trip would be in the ball park of \$550.00 for one person. Additional personnel would add about \$200.00 per day plus expenses or another \$475.00 per two day trip.

Mr. Robert J. Shelley
Page 2
August 7, 1992

If you have any other questions please feel free to give us a call.

Sincerely,

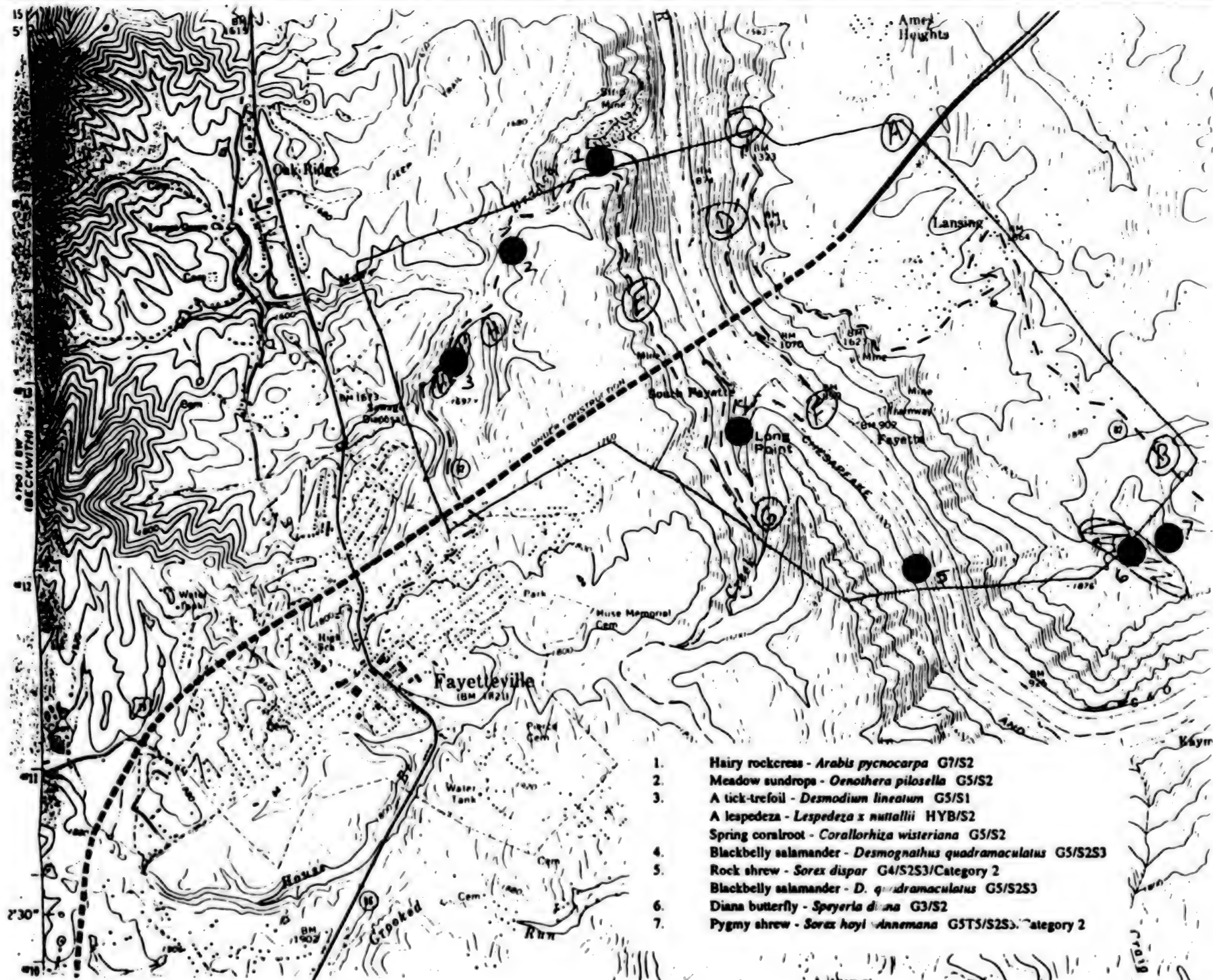
A handwritten signature in cursive script that reads "Brian R. McDonald".

Brian R. McDonald
Coordinator
Natural Heritage Program
Wildlife Resources Section

BRM:jc

Enclosure

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PREPARERS AND CONSULTANTS

PREPARERS

Leon Clifford — (Former) On-site Planner, NPS
Denver Service Center (DSC)
Pat Esmond — (Former) Outdoor Recreation
Planner, New River Support Office, DSC
Eunice Fedors — Historian and Cultural
Resource Specialist, DSC
Mike Hunter, Chief, New River Support
Office, DSC
Joe L. Kennedy — Superintendent, New
River Gorge National River
Kimball E. Koch — Landscape Architect and
Team Captain, DSC
Paul Lee — Interpretive Planner, Harpers Ferry
Center, DSC
Karen Vaage — Landscape Architect, DSC
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Rick Brown — District Ranger
Jay Connerley — Ranger
Steve Hastings — Chief of Maintenance
Henry Law — Assistant Superintendent
Carol Pollio — Natural Resource Specialist
John Reed — Land Acquisition Officer
Kinsey Schilling — Subdistrict Ranger
Loretta Schmidt — Historian
Lorrie Sprague — Management Assistant
Ken Stephens — Natural Resource Specialist
Warren Snyder — Chief, Interpretation and
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Advisory Council on Historic Preservation

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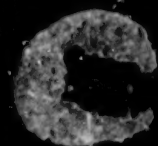
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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

NPS D-86 September 1993

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